The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. XL. CHICAGO, ILLINOIS, JANUARY, 10, 1903. No. 2.

Original Articles.

TUBERCULAR PERITONITIS

IN EARLY LIFE: WITH ESPECIAL REFERENCE TO ITS TREATMENT BY LAPAROTOMY.*

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The clinical differentiation of cases of tuberculosis of the peritoneum in early life, based solely on the pathologic findings, is inadequate for a satisfactory decision, first, as to diagnosis, second, as to etiology and treatment.

It has long been known that in certain cases of tubercular peritonitis laparotomy has proved to be curative, where all other means of treatment have been ineffectual. The reason why the laparotomy is in these cases successful is not definitely known.

Tuberculosis of the peritoneum, from an etiologic standpoint, is often obscure, but it may be a primary infection. Most commonly, however, it is secondary to tuberculosis of the mesenteric lymph-nodes. Again, it may be secondary to tuberculosis of other organs, such as of the intestines, of the lungs or of the lymph-nodes in various parts of the body. It may arise in the course of various infectious diseases, especially the exanthemata. From a pathologic point of view, the process consists of the formation of miliary tubercles on the peritoneum, which give rise to opaque cheesy thickening, often nodular, and with firm adhesions of the adjacent surfaces. This pathologic condition may or may not be accompanied by an exudation into the peritoneal cavity; the ascites may be serous, sero-purulent or purulent in character and of different amounts, but the amount of fluid when any is present is usually considerable.

Again, from a pathologic standpoint, we may practically speak of three forms, first, a miliary tuberculosis with ascites acute or subacute in its course. Second. A fibrous form in which ascites may be, but is not usually present. This second form is essentially chronic, and is represented by the formation of a fibrous tissue with matting of the intestine, the omentum and the mesentery, without much tendency to caseation or to breaking down. Third. A later stage of the form just described, in which there occurs large tubercular deposits with caseation and softening. This form has by some pathologists been called the ulcerative, and in it the lungs are commonly affected. It is not so chronic as the fibrous form, but is characterized by more fever and more severe symptoms.

In view of the difficulty in determining clinically the various types just enumerated we must consider certain questions: 1. The diagnosis of the presence of a tuberculosis of the peritoneum. 2. The detection of which pathologic form is present. 3. Whether the tuberculosis of the peritoneum is localized and is not complicated by tuberculosis elsewhere (this practically means outside of the abdominal cavity), or is secondary to tuberculosis of the thoracic cavity. 4. Which of these forms of tuberculosis of the peritoneum are amenable to treatment? Finally, 5, under what circumstances and in what cases should laparotomy be performed?

The answers to these questions must be, it is acknowledged, somewhat uncertain. It is only in a general way that, with our present knowledge, we can determine clinically whether a laparotomy should be performed. The finer details, both pathologic and symptomatic, although interesting at the autopsy in the light of advancing our knowledge of the subject, are clinically of little practical value in comparison with the importance of differentiating the operable from the inoperable cases.

With this general statement we must now consider how we can solve the various questions which have just been enumerated, and finally, we must determine whether we shall or shall not operate in a given case. My views on this subject are based on a study of those cases of tubercular peritonitis in early life which have occurred at the Infants' Hospital and at the Children's Hospital during the last eighteen years, and a table of these cases will be given later.

The symptoms in infancy and early childhood of tuberculosis of the peritoneum are so varied, unsatisfactory and obscure that it is of great importance first to determine whether the case is tubercular or not, and next whether the tuberculosis is of the peritoneum, lung, lymph-nodes or any other part of the economy.

In many cases the physical examination fails to give us this knowledge, and if the temperature is irregular and much raised, as 102, 103 or 104, it will often be impossible to determine this question decisively. If, however, the temperature is moderate, 99 to 100 or 101, and keeps fairly regular within these bounds, we can with decided benefit use the tuberculin test. Although it can not at present be said that a tuberculin reaction will take place in every case of tuberculosis in infants and children, yet it is of value when it occurs, although its negative evidence is not decisive.

After having made ourselves fairly sure that tuberculosis is present, it should next be decided, if possible, whether the tuberculosis exists elsewhere than in the abdominal cavity. This in early life is often exceedingly difficult, as there may be a tubercular process in the thoracic cavity, either of the bronchial lymph-nodes or of the lung itself, without physical evidence, the sputum

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Diseases of Children, and approved for publication by the Executive Committee: Drs. H. M. McClanahan, Edwin Rosenthal and Samuel W. Kelley.

in these cases often being impossible to obtain. A swab, however, for culture should be taken from the esophagus, and will in some cases reveal the presence of the tubercle bacillus, which otherwise would not have been detected. The examination of the blood in reference to leucocytosis is of very little diagnostic value, as leucocytosis may or may not be present.

An examination of the urine for tubercle bacilli should be made in cases where there is evidence of renal or vesical disturbance. All these examinations, when they have failed to give results, are merely negative evidence and are simply to be used as additional factors in the problem which is being solved. If the bacilli are found from the swab, or in the urine, this would be so much evidence in favor of there being tuberculosis in some part of the lung or in the genito-urinary tract in addition to the possible presence of tuberculosis of the peritoneum.

There are certain facts connected with the age of the individual which aid us in making a practical clinical classification, and which are worthy of great consideration.

Tuberculosis of the peritoneum may occur both in infancy and in childhood, but those forms which show a marked inflammatory condition, either with or without ascites, are more common in children than in infants. In infants, on the other hand, it is more common to have a miliary tuberculosis of the peritoneum in the course of a general tuberculosis which does not as a rule show abdominal symptoms. In children, again, the peritoneal inflammation may be so localized as to constitute a disease of itself, and this is so marked that this phase of the disease and this stage of the development of the individual constitutes what, for want of a better name, is called "chronic tubercular peritonitis," and it is this chronic tubercular peritonitis occurring in individuals most frequently from 1½ to 4 years of age which can be treated as a disease per se, and which gives us the largest percentage of recoveries from tubercular peritonitis by means of laparotomy.

We can therefore state that, provided we have a localized tubercular process in the peritoneum which is chronic in its course, that it is this class of cases which should be treated by laparotomy. In this class of cases, however, certain forms give a better prognosis than others. The most favorable form for treatment by laparotomy, is where the first pathological form described above is present, that is, miliary tuberculosis of the peritoneum with ascites; while the less favorable form for laparotomy is that which we have spoken of above as the fibrous form, and the prognosis in this fibrous form seems to be more favorable if ascites is present than if ascites is not present.

Here again I would draw attention to the fact that while in early chilhood after the first year this miliary tuberculosis of the peritoneum is the most favorable form for laparotomy, yet on the other hand laparotomy is seldom of avail during the first year of life, as miliary tuberculosis of the peritoneum in early infancy is usually part of a general tuberculosis and therefore can not be benefited by laparotomy owing to the activity of the tubercular process elsewhere.

Given, then, the opinion in a special case that tuberculosis of the peritoneum is present, we first consider the age in determining whether laparotomy should be performed. If the patient is under one year, although as a last resort we may operate, it does not have the same favorable prognostic significance as at a later period. Moreover, we can expect a more favorable result from laparotomy when ascites is present, as the presence of ascites usually shows a less advanced and more active process than when it is not present, as is often the case in the fibrous form, which has been stated to have a less favorable prognosis.

If by means of physical examination we have made up our minds that we probably have a localized fibrous form to deal with, the opinion being based on the detection of masses large and small in the abdomen, without evidence of fluid, even then it is better to operate than to run the risk of the child dying of exhaustion, provided we find no evidence that tuberculosis exists outside the abdominal cavity.

In the third or so-called ulcerative tuberculosis of the peritoneum it is usually evident on physical examination that there is tuberculosis elsewhere than in the abdominal cavity, the probability being that it is in the bronchial lymph-nodes or lungs, and that the tubercular peritonitis in this instance is secondary to a thoracic tuberculosis, and therefore, as a rule, can not be benefited by laparotomy.

The primary forms, on the contrary, had much better always be operated on, even when the infection is secondary to a tubercular mesenteric lymph-node, for the removal of such node or nodes is indicated and in such cases there is a fair chance for a radical cure of the general tubercular infection of the peritoneum.

I have had cases in which a child who was failing in appetite, losing in weight and strength, and having a heightened temperature, and in whom a tubercular mesenteric lymph-node was detected on physical examination, completely recovered after removal of the tubercular node, and in whom after a number of years, at least five or six, there was no return of the disease.

There have, of course, been cases of tubercular peritonitis which have recovered spontaneously, but the fact that this result can occur does not indicate, as has been suggested by some writers, that we should not operate but should wait and see whether such spontaneous recovery would take place.

The danger of a localized tubercular peritonitis, which we know can get well, becoming disseminated and thus producing a general tuberculosis or a local tuberculosis of the lung or brain, is undoubtedly a great one, and knowing that if this dissemination does take place the child will in all probability die, it seems much more reasonable to operate before such dissemination has taken place than to wait until it is too late. It is also well known that, first, in individual cases of localized tuberculosis we are unable to say whether such cases will recover spontaneously or will become a general tuberculosis, and second, that an exploratory laparotomy, when performed by an expert, is known to be of little danger, especially in the earlier stages of the disease when the child has not yet become markedly reduced in strength and vitality.

Is it not better, then, to give the child the benefit of the chance, and when we are reasonably sure that tubercular peritonitis is present in a child over one year of age, and when there are no evident signs of tuberculosis elsewhere, or possibly only in the mesenteric lymph-nodes, is it not better to make an exploratory laparotomy at once?

At a meeting of the American Pediatric Society, held in Boston on May 27, 1902, I presented[1] 6 cases of tubercular peritonitis in which laparotomy had been performed and complete recovery had taken place. These

1. Reviewed in THE JOURNAL A. M. A., Oct. 18, 1902, ¶70, p. 1009.

cases were only 6 out of the 20 cases which have been operated on and recovered in our service at the Children's Hospital. [The other 18 cases lived at too great a distance to be brought to Boston.] I also found in our service at the Infants' Hospital during the same period only one case of tubercular peritonitis. This case died, and, proved to be one in which the tubercular peritonitis was part of a general tuberculosis, thus exemplifying what I have already said, that tubercular peritonitis in the first year of life is rare as a primary disease, and is almost invariably part of a general tuberculosis.

I wish to acknowledge the courtesy of my colleagues at the Children's Hospital for allowing me to report those cases which happened to occur in their respective services.

During a period of 18 years, from 1884 to 1902, the total number of cases admitted to the Children's Hospital in which the diagnosis of tubercular peritonitis seemed reasonably certain was 69. Of this number 39 were boys and 30 were girls.

The relative occurrence at the different ages showed the condition to be extremely rare in the early months of life, the youngest case recorded being 14 months. After the first year and a half of life the disease was found to become frequent and was most common between 2 and 4 years, after which it was of only occasional occurrence. The influence of age to the disease is seen in the following table: One to 2 years, 11 cases; 2 to 3 years, 17 cases; 3 to 4 years, 14 cases; 4 to 5 years, 9 cases; 5 to 6 years, 4 cases; 6 to 7 years, 3 cases; 7 to 8 years, 1 case; 8 to 9 years, 5 cases; 9 to 10 years, 1 case; 10 to 12 years, 4 cases.

The average duration of the symptoms before the child entered the hospital was about three months. The statements made by the mother were often indefinite. Usually the first thing noticed was the gradual and increasing distention of the abdomen, which was present in nearly every case except those which began as tubercular meningitis. Occasionally the swelling appeared to come on quite acutely, sometimes following a blow or fall, and at times rapidly increased. The course was usually chronic, sometimes dating back a year or even more, and associated with failing health and loss of weight. In many cases rhachitis is mentioned as being present, but the hospital records were not sufficiently explicit on this point to be of much value. Distention of the abdominal veins was recorded in 3 cases only.

FAMILY HISTORY.

There was a family history of tuberculosis in 20 cases, representing 30 per cent. This, however, bears no relation so far as the statistics are concerned to the death rate.

GENERAL SYMPTOMS.

Abdominal tenderness was generally absent, and if present was rarely severe. The movements of the bowels, so far as recorded, were not significant, loose movements and constipation alternating, and one being about as frequent as the other. Even in the cases in which an autopsy subsequently showed the presence of tubercular ulcers of the intestines, there was, as a rule, nothing especially characteristic or suggestive noted in the discharges.

SPECIAL SYMPTOMS.

The temperature was irregular and, as a rule, elevated, although in some cases it was only slightly above normal, and at times was normal or even subnormal.

The pulse was usually accelerated, its rate varying between wide limits.

The respirations also were generally accelerated, and varied between wide limits.

There were records of white blood counts in only 23 of the 69 cases. These counts showed an average leucocytosis of 16,435, the lowest count being 5,400, the highest 44,000. Counts of 15,000 to 20,000 were frequent. In certain of the cases, but by no means in all, the leucocytosis could be explained by coexisting inflammatory changes. So far as this series of cases is concerned, we must admit that the presence or absence of leucocytosis is of very little value in either the diagnosis or the prognosis of tubercular peritonitis in children.

An analysis of this series of 69 cases in reference to the mortality gives the following result:

In Series 1, number of cases dying in the hospital, without operation, 20, or 29 per cent.; after operation, 12; total number of deaths occurring in the hospital 32, or 46.3 per cent.

In Series 4, total number of cases discharged without operation, 17, or 24.7 per cent.

Of the 32 cases operated on the results were:

In Series 3, recovering from operation and discharged to parents, 20, or 62.5 per cent.

In Series 2, dying in the hospital after operation, 12, or 37.5 per cent.

In the analysis of the four series of cases, into which the 69 cases are naturally divided, I have made use of the following signs:

* = Cases in which autopsies were obtained.

\+ = Definitely stated to be present, or reasonably inferred to be present from the data given in the records.

+? = Not definitely stated to be present, but probably present by inference.

? = Data not sufficient to justify one in affirming or denying the point in question.

0 = Definitely stated to be absent or negative.

— = Not definitely stated to be absent or negative, but presumably absent.

The Arabic numerals are the numbers of the cases.

SERIES 1.—Cases Dying in the Hospital Without Operation.

Number of Case.	*3	*6	*7	*8	*11	14	*15	*22	*23	*24	*25	*28	*29	*33	*35	1 40	*43	*45	*46	*57
1. Presence of fluid.	0	0	0	0	0	0	+	0	+	0	—	—	+	0	0	+	0	—	—	—
2. Abdominal distention.	0	+	+	0	+	+	+	0	+	+	+	+	+	0	0	+	0	+	+	+
3. Intestinal adhesions.	—	+	0	—	—	?	+	+	+	+	+	—	+	—	—	?	+	+	+	+?
4. Tub. of mesentery or mesenteric nodes or both	+	+	0	+	*	?	+	+	+	+	+	?	+	+	+	?	+	+	+	+
5. Thick'n'g of peritoneum	—	+	0	—	—	?	+	+	+	+	+	?	+	?	—	?	+	+	+	+?
6. Miliary tubercle of peritoneum	+	+	+	—	?	?	+	+	+	—	+	+	+	+	+	?	+	+	+	+
7. Miliary tubercles of liver, spleen, kidneys or all	+	+	+	—	+?	?	+	—	+	—	+	+	+	+	+	?	+	+	+	?
8. Tuberculosis of lungs or pleuræ.	+	+	+	+	—	—	+	+	+	+	+	+	+	+	+?	?	+	+	+	+
9. Tub. of meninges or brain or both	+	+	+	+	—	—	—	—	+	+	—	—	+	+	+	+	+	+	+	—
10. Enlarged lymph nodes, cervical, axillary, inguinal or bronchial	+	+	+	—	—	+	+	+	+	+	+	+	+	+	+	—	+	+	+	—
11. Tuberc'l'r ulcers of intestines	?	+	—	+	+	?	+	+	—	+	+	—	—	+	—	—	+	+	+	—

1. Complicated by diphtheria (?).

Of the cases in Series 1 autopsies were obtained in 18, in which not one showed the lesions of tuberculosis to be limited to the peritoneum and mesenteric lymph nodes. Eleven cases showed tuberculous ulcers of the intestines, but their presence could not have been diagnosticated from the clinical symptoms recorded. Seventeen cases showed some tuberculous lesions of the lungs. Twelve cases showed tuberculous lesions of the brain or meninges.

SERIES 2.—Cases Dying in the Hospital After Operation.

Number of Case.	16	19	38	*39	*47	50	51	56	58	61	65	2 68
1. Presence of fluid	0	+	+	+	+	0	+	0	+	+	+	+
2. Abdominal distention	+	+	+	+	+	+	+	+	+	+	+	+
3. Intestinal adhesions	+	+	−	?	+	?	+	+	+	+	0	+
4. Tuberculosis of mesentery or mesenteric nodes or both	+	+	−	?	+	+	+?	+	+	+	−	+
5. Thickening of peritoneum	+	+	−	?	+	?	+	+	+?	+	0	+
6. Miliary tubercles of peritoneum	+	+	+	+	+	?	+	+	+	+	0	+
7. Miliary tubercles of liver and spleen	?	−	−	?	+	?	?	?	?	?	?	?
8. Tubercles of lungs or pluræ	+?	−	−	?	+	−	−	−	−	−	?	+?
9. Tuberculosis of brain or meninges	−	−	−	?	−	−	−	−	−	−	−	−
10. Enlarged lymph nodes, cervical, axillary, inguinal or bronchial	−	−	−	?	−	+	+	−	−	+	+	−
11. Tuberculous ulcers of intestines	..	..	..	..	+	..	..	..	..	..	..	..
12. Tuberculin reaction	..	+	..	..	+	..	..	..	..	..	..	..
13. Pathologic exam. of tissue removed	..	..	..	..	+	..	+	..	..	+	..	..

2. Complicated with general septic peritonitis and intestinal perforation.

Six of the 12 cases of Series 2 (i. e., 16, 19, 47, 51, 56, 69) were on incision of the abdominal wall found to be practically inoperable, owing to the extensive adhesions of the intestines to each other and to the abdominal wall. Four of the above-mentioned cases had fluid in addition to the adhesions.

SERIES 3.—Cases Operated on and Discharged Temporarily Relieved.

Number of Case.	5	9	10	3 13	4 20	26	37	41	3 42	44	48	49	52	55	59	60	3 63	3 66	67	69
1. Presence of fluid	−	0	0	−	+	+	+	+	+	0	0	+	+	+	+	+	0	+	+	+
2. Abdom. distention	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
3. Intest. adhesions	+	+	−	+	−	+	−	−	+	−	+	−	−	?	+	+	+	+	−	+
4. Tub. mesentery, mesenteric lymph nodes, or both	+	+	+	.	−	+	−	+	+	?	+	+	−	?	+	+?	+	+	?	+
5. Thickeni'g of peritoneum	+	+	+	+	−	+	−	−	+	?	+	?	+	?	+	+	+	+	?	+
6. Miliary tubercles of peritoneum	+	−	+	?	+	+	−	−	+?	+	+	+	+	?	+	+	+	+	+	+
7. Miliary tuber. of liver and spleen	−	−	−	?	−	?	-	+	+?	?	?	?	?	?	+	?	?	?	?	?
8. Tuberculosis of lungs or pleuræ	?	?	−	?	−	?	?	?	−	−	−	−	−	−	−	−	−		−	−
9. Tub. of brain, meninges or both	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−	−
10. Enlarged lymph nodes in neck, axillæ or groin	+	−	+	+	−	+	+	−	−	−	+	+	−	−	+	−	−	−	−	−
11. Pathol. diagnosis from specimen	+	0	+	.	.	.	.	.	.	.	+	.	.	.	.	+	+	.	.	+
12. Condition when discharged	Good.	Improved.	Improved	Poor. 5	Good.	Excellent.	Nearly well.	Not relieved.	Relieved.	Fair.	Good.	Good.	Good.	Good.	Good.	Good.	Not improved.	Not improved	Good.	Good.

3. Discharged not relieved. Incision abdominal wall. Further operation made impossible by universal intestinal adhesions.

4. Complicated with ovarian cyst.

5. Relieved, recurrence. Discharged because of pertussis.

SUMMARY.

A summary of the cases in Series 3 shows that the condition when discharged was the same or worse in 5 cases, or 25 per cent. In 4 (Nos. 13, 42, 63, 66) of the 5 cases intestinal adhesions prevented successful operation, although in 2 cases some fluid was present. Extensive adhesions, therefore, are shown by this limited number of cases to be a distinctly unfavorable condition. The condition in the remaining case was not stated at the time of its discharge. That is, of the 5 cases operated on in Series 1, 2 and 3 in 5 per cent. it was impossible to learn what the condition was at the time of the child's discharge.

A limited number of adhesions did not apparently affect the results of the operation, as they were present in six of the fourteen satisfactory results. The report of the operation in a number of cases failed to give information as to the extent of the adhesions found at the operation. Satisfactory results were obtained in cases numbered 9, 10, 44, 48, in which no fluid was present. Therefore, the absence of fluid does not preclude an immediately successful result.

The presence of fluid with few or no adhesions, and with the absence of tuberculosis elsewhere would seem to be the most favorable class of cases for operation.

The analysis of these 69 cases, therefore, shows that tuberculosis of the mesenteric lymph-nodes does not preclude a successful result. Also, that inasmuch as the presence of palpable masses and the absence of fluid does not preclude a successful operation, and inasmuch as the degree of intestinal adhesions can only be surmised before operation, laparotomy would seem to be indicated in all cases of tubercular peritonitis, provided (1) that the general condition of the patient permits it, and (2) that there is an absence of evidence of cerebral, pulmonary or extensive glandular or bone tuberculosis.

The presence of tuberculous ulcers of the intestines is obviously an unfavorable condition for operation, but in many cases they cannot be diagnosticated by the clinical symptoms.

Of the above 20 cases operated on and discharged relieved, 13 have been traced and the results known up to the present date, June, 1902. Of these 13 cases 11 are to-day well, 2 have died and one is undergoing a relapse. The final results of the operations to date may be seen in the following table:

Case 5 died 7 months after operation.
Case 9 is well 2 years after operation.
Case 10 is well 2 years after operation.
Case 13 is well 4 years after operation.
Case 20 is well 5 years after operation.
Case 37 is well 9 years after operation.
Case 44 was well for one year, but is now undergoing a relapse.
Case 49 is well 3 months after operation.
Case 52 is well 2 years after operation.
Case 59 is well 3 years after operation.
Case 60 is well 2 years after operation.
Case 66 died 4 months after operation.
Case 67 is well 3 months after operation.

Of these 13 cases, which ultimately recovered, 2 (Nos. 13 and 66) were in poor condition when discharged.

Of the 7 cases, the ultimate results of which we could not trace, all but 2 were in excellent condition when discharged, and inferentially were permanently benefited by laparotomy.

SERIES 4.—Cases Discharged from Hospital Without Operation and Against Advice.

Number of Case.	1	2	4	12	17	18	21	27	30	31	32	34	36	53	54	62	64
1. Presence of fluid	+	−	?	−	?	+	0	0	?	+	0	0	0	?	0	0	0
2. Abdominal distention	+	+	0	+	+	+	+	+	+	+	+	+	+	+	+	+	+
3. Palpable masses in the abdomen	.	+	+	−	−	−	+	−	+	+	+	?	+	+	+?	−	−
4. Enlarged lymph nodes neck, axillæ or groin	−	−	+	−	+	−	+	−	−	−	−	+	−	−	−	+	+
5. Probable tuberculosis elsewhere					6 + ?	6 + ?	? ? ?	? + ?	6 ? ?		?	? ?	7 ? ?	? ?	?	8 ? + ?	
6. Tuberculin reaction		?	?	?	?	+	?	+	?	?	?	?	?	?	?	?	?
7. Condition at discharge	? Slightly relieved.	? Relieved.	? ?	? Improved.	? Not relieved.	+ Not relieved.	? ?	Relieved.	? ?	? Much relieved.	? Relieved.	?	?	? Slightly relieved.	?	? N.t relieved.	? Not relieved.

6. Lungs. 7. Lung. 8. Kidney. 9. Ankle.

In this series there were 17 cases, in 10 of which there was more or less evidence of tuberculosis elsewhere. Eight cases (Nos. 1, 2, 4, 12, 31, 32, 34, 64) were operable, and of these 8, 4 refused operation. In the remaining 9 cases there were strong indications against operation.

Of these 17 cases 9 were discharged relieved, but the data as to the exact condition of the patient when discharged is not satisfactorily stated.

Of the above series only 5 could be traced, and of these all are alive (Nos. 12, 17, 32, 53 and 64).

Before ending this paper I wish to recognize the laborious and exact work done by Dr. Maynard Ladd,

who has carefully gone over the records of all these series of cases and arranged them as I have presented them to you.

DISCUSSION.

DR. J. M. DODSON, Chicago—A point of interest is the use of tuberculin for diagnostic purposes, not only in tubercular peritonitis, but in suspected tuberculosis of the lymph nodes. There is, fortunately, a reaction from the disappointment experienced in the early history of the use of this agent. Its immense value and perfect safety when used under proper conditions are now beginning to be recognized. In a condition like tubercular peritonitis, where the diagnosis is often so obscure, its great value is, of course, evident.

There is another remedial measure which holds out, it seems to me, some promise, i. e., the use of the *x*-ray. In a number of cases of tubercular peritonitis in adults in the Presbyterian Hospital in Chicago, the *x*-ray has been used with very gratifying results. There has been a subsidence of tenderness and pain, and a disappearance of the effusion and of the fever. It is too early to say whether the relief will be permanent or not. Theoretically, we have much reason to hope that the *x*-ray may prove of use in the more deeply-seated tubercular affections. By whatever means it may produce its effects in cutaneous tuberculosis or lupus, the good it has done can not be denied. It is a remedy, moreover, which, with the more recent apparatus and methods, can be employed with safety, and utilized in children and even in infants with safety, if care is taken as to exposure and adjustment of the apparatus. I would, therefore, suggest the use of the *x*-ray, especially in those cases in which operation is contraindicated.

DR. MARGARET T. SHUTT, Springfield, Ill.—I was engaged some time ago in making blood counts in a child. There was a leucocytosis of 30,000 in addition to a marked anemia. It was a rather acute condition, and there was present a tumor on the right side. The diagnosis was in doubt because of the regularity and size of the tumor, until at operation it was found that the tumor was composed of matted intestines and omentum and large tubercles. It was supposed, because of the size of the tubercles, that no good would result from the operation, but when I last heard of the child, about twelve months later, it was apparently perfectly well. In another recent case of miliary tuberculosis in a child of ten I made a blood count, and found no leucocytosis, but a marked anemia. That case has not yet been operated on.

A CASE OF PROGRESSIVE IDIOPATHIC ATROPHY OF THE SKIN.*

A. RAVOGLI, M.D.

CINCINNATI.

Progressive atrophy of the skin is an affection of great importance on account of the causes producing it and the conclusions which we can derive therefrom. Cases of this affection have been reported by Buchwald, Touton, Colombini, Elliott, Bronson, Pospelow, Neuman, Ohmann-Dumesnil, Popoff, Jadassohn, Unna, Krzysztalowicz and others. In some of the cases the morbid process producing atrophy of the skin was known, in others it was perfectly obscure. From the study of all the reported cases Unna gave his classification of the atrophies of the skin as idiopathic and deuteropathic, calling idiopathic the cases where the skin is primarily affected, without progressed morbid process, and deuteropathic the cases of atrophy where the skin falls into atrophy secondarily on account of a tubercular, syphilitic or other process which has damaged its stroma.

Our case belongs to the first group, the affection occurring primarily on the skin. The idiopathic atrophies are also distinguished as limited and diffused, and our case belongs to the second. Although in general the causes of the atrophy of the skin are obscure, yet the authors unanimously agree that the atrophy of the skin is the consequence of a disturbance of the innervation. The affection of the nervous system in these cases has a disturbing influence on the trophic nerves, and the skin in consequence falls in an atrophic condition. Before proceeding to the study of the action of the trophic nerves and to the cause of their disturbance, it is better to call our attention to the results of the atrophic process on the tissues of the affected skin, to be able to find out the pathologic alteration, which may clear up somewhat the process from which they are derived.

The case under consideration is of more interest because an autopsy could be held.

Flora F., 18 years of age, was admitted into the city hospital under the neurologic service, and I thank Dr. Hoppe for permission to use the history of the case. She was brought to my attention on account of the peculiar condition of her skin.

Her mother is living and is a strong woman in good health. Her father died some years ago, they claim from consumption.

Personal History.—The patient was four feet and ten inches tall, of poor and meager development. Three years ago she claimed to have had typhoid fever, and from that time she discovered the atrophic condition of the skin. She has always been a weak and delicate girl; she attended school, but stopped, as the work was too hard for her. She often had fainting spells. Lately her condition grew worse, she got dizzy and fell without losing consciousness. She could not walk without help, had an ataxic gait, and was constantly leaning on the left side. If the support was taken away from her she fell toward the left.

Examination.—From the photograph it appears that she had a mask-like countenance, the eyes large and staring, bulging and expressionless; both pupils were dilated, but the right more so; the left eye was somewhat convergent; the pupils did not respond to the light.

With the ophthalmoscopic examination was found edema of the optic disc, with some exudation around spreading to the retina for a short distance. The veins were swollen and tortuous, the arteries reduced in size, the same in both eyes. From the ophthalmoscopic finding was made the diagnosis of double, optic neuritis. The external rectus of the left side was paralyzed. At times she suffered with headache. Her grip was very weak, the knee-jerk exaggerated on both sides, no ankle clonus. Plantar flexion bilateral.

Her skin was somewhat white and anemic all over the body, but thin and soft. It showed white superficial scars, like patches, which reminded one of the appearance of mussed cigarette paper (Pospelow), thin and atrophic. One round scar the size of a five-cent piece was one inch above the left eye, and another on the left side of the forehead at the hair line. The largest scar occupied in a semicircular course the right side of the chest, beginning at the jugular region, running down to the right breast one and one-half inches below the nipple, from there around the axilla of the same side covering the whole shoulder to the apex of the scapula, then extended to the whole right arm and forearm, stopping at the wrist. On the left arm a circular scar of the same character was on the elbow, on its extension surface, five inches in length. Another large round scar was seated on the internal surface of the left thigh, oval in shape, seven inches in length. Two other round scars were on both knees on the extension surface.

All the cicatricial areas had a peculiar dull pearl-white color, glistening in places, smooth in others, showing small holes or indentations as if honeycombed, or small cicatricial string-like elongations. It could not easily be raised in folds and when raised remained folded for a while, like parchment paper. The whole cicatricial surface did not show the underlying blood vessels; it seemed destitute of pigment, lanugo hair could not be found, no desquamation was ever seen. On the periphery of the affected skin round, reddish-brown erythe-

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. W. T. Corlett, L. Duncan Bulkley and W. L. Baum.

matous spots were found, which lasted only a few days, leaving the skin in the already described condition.

In the atrophic skin of the arm a yellowish-green patch, result of a contusion, was observed, which the patient referred to a fall on her arm in attempting to walk. She felt no pain on the affected skin and would have scarcely noticed it except for its appearance. The atrophy of the skin began some three years ago at the time when she claimed she had typhoid fever, and progressed gradually to the present condition. The muscles of the affected arm were weak and she could move it with difficulty. The sensibility in the cicatricial areas was somewhat benumbed. Two test tubes, one filled with hot water and the other with ice water, were applied on the scar surface and there was some hesitancy in distinguishing which was the hot and which was the cold. When tried with the head and with the point of a pin, on the cicatricial areas, she could not distinguish them as she did on the normal skin. The sense of pain was still maintained, although somewhat benumbed.

The condition of the patient grew gradually worse, at times she became delirious, at times she fell in a stupor, regaining consciousness again, and died April 26, this year.

Autopsy.—The postmortem was held on the same day by the neuropathologist of the hospital, Dr. David Wolfstein. The limited time does not allow me to give a full report of the alterations which were found in the different organs. I will only mention that in the liver were found deep cicatrices, extending to the parenchyma, and also some grayish-pink nodules around its surface. The spleen was greatly enlarged, swollen, friable and congested. The interesting alterations were all in the brain. Dura normal, pia mater showed a fibrous thickening near the longitudinal fissure. Under the right frontal lobe in the orbital surface a gumma was found the size of a walnut, and in the same place in the median line a small-sized gumma confined to the gray matter. Another gumma was found in the right caudate nucleus extending back to the internal capsule. A large gumma was found in the tempero-sphenoidal lobe, which showed a marked area of softening. On the base of the brain the third nerve was covered with a gelatinous translucent mass, but the nerve appeared healthy. Some gelatinous mass was collected on the upper part of the right optic tract pressing on the right middle cerebral artery. Some infiltration was marked on the right surface at the junction of pons and medulla. Imbedded in this mass was the right sixth nerve, the basilar and the cerebral artery, the seventh and eighth nerves. On the left side another gummatous production was found on the exit of the fifth nerve, and in the middle pedicle of the cerebellum. Spinal cord was normal.

The report of the pathologic alterations which were found especially on the base of the brain show the interesting rôle of the nervous system in the nutrition of the tissues and consequently the production of the atrophy of the skin.

The experiments begun by Claude Bernard, continued by Ludwig, Thicq, Owsjannikow and Dittmar have established the presence of a vasomotor center, which is placed at the point of the calamus scriptorius, extending to the corpus trapezoides as a place very rich in multipolar gangliar cells. Any irritation produced on this point causes the constriction of the arteries of the whole body, and in consequence increasing of the blood pressure. And, on the contrary, a cause producing paralysis of this center causes dilatation of all arteries and consequent diminution of the blood pressure. The gangliar cells which are in the fourth ventricle, according to Onuf and Collins, originate sympathetic fibers. From this vasomotor center the vasomotor fibers proceed together with motor and sensitive fibers through the internal capsule toward the pons to the center of the vasomotor nerves, the medulla oblongata.

In this case it is clear that the pressure produced over the cells of the vasomotor nerves has been the cause of the atrophy of the skin. Weir Mitchell found that on cutting the nerves through the perspiration and the secretion of the sebaceous matter of the skin stopped entirely, while on cutting the nerves partially the secretion and the perspiration continued, and in some cases a glossy skin appeared. In some cases of traumatic neuritis Cassirer found hyperhydrosis in the corresponding regions where a glossy skin existed and yet the motor and sense functions were maintained.

We can say that the idiopathic atrophy of the skin is in most of the cases the result of a trophoneurotic alteration, which may be the result of an affection of the vasomotor center, as in the present case, or from peripheral affection of the nervous ramifications or of the nervous ganglia. A trophoneurotic affection is constantly accompanied by other alterations of sensibility and also of stasis in the blood vessels.

The influence of the trigeminus in the nutrition of the epidermis was demonstrated by the experiments of Gaub, who found that after cutting this nerve between its origin and the ganglion Gasseri in the epidermis, there were developed necrotic patches, and in other places epidermic growths.

Returning to our patient, she never complained of any pain, and she would have scarcely noticed the affection except for its appearance. It is interesting to recollect that the muscles of the affected arm were weak and the sensibility partially maintained.

During her life I removed a small piece of the affected skin, near the edge of the atrophic patch, which was treated in 4 per cent. formalin solution, hardened in alcohol and stained by different processes.

The course, the clinical symptoms and the pathologic alterations of the skin show that the affection is the result of an inflammatory process of a trophoneurotic origin, which soon causes atrophy and sclerotic condition of the tissues of the skin. In my specimens I was able to find a discrete small cell infiltration in the layers of the derma in the papilla and surrounding the glands, as was found by Buchwald, Jadassohn, Colombini and also between the collagenous fibers as found by Neuman. Unna and Huber found the plasma cells, which I could find in my specimens, together with enlarged connective tissue corpuscles between the collagenous fibers. The superficial layer of the derma is the place where the infiltration is found most abundant. The connective tissue fascicles as noted by Krzysztalowicz are thickened and hypertrophic; they run like waves, reminding one of the structure and disposition of the fibers in keloid. The same thickened condition of the fibers can be seen in the flattened papillæ, where I could find some large cells in a hyalin degeneration. The elastic fibers seem to be somewhat diminished, and this observation is confirmed by those of Heuss and others who have found them in an atrophic condition. In some places the papillæ are flattened, in others elongated and in a triangular shape.

The epidermis is greatly changed, the stratum corneum in some places is much thinner on account of the flattening of the epidermic cells, which form a kind of dry thin lamellæ. But in some places it is somewhat thickened, as can be seen in Figure 1, and as was found in the case described by Pospelow. Neuman in his case described the horny layer as a strip without nuclei, the stratum granulosum reduced to a simple row of cells, the stratum spinosum as fairly maintained. Colombini described the horny layer very much thinner with flat dry cells, the stratum granulosum resulting of only one row of cells, the stratum spinosum atrophic,

and the basal layer formed by small cells filled with pigment. Huber found the horny layer thinner, the stratum granulosum formed by only one row of cells and the stratum spinosum greatly reduced in thickness, consisting of elongated cells with small nuclei, so, too, the cells of the basal layer were smaller and filled with pigment granules. Unna, in his description and in his microscopic illustrations, showed the horny layer unequally thickened, the stratum granulosum sufficiently preserved, but the stratum spinosum atrophic, and the columns of cells are no longer found between the papillæ. The description given by Krzysztalowicz is entirely in accordance with that given by Unna. In Figure 2 can be seen the stratum corneum much thinner, consisting of dry lamellæ where nuclei can not be seen; the stratum lucidum has disappeared, pigment in a very small quantity can be found. The stratum granulosum is reduced to one row of cells, while the stratum spinosum shows the cells well maintained but elongated horizontally, having lost their cylindrical appearance and somewhat disarranged. The whole epidermic surface appears uneven and irregular.

The papillary layer seems to be the part mostly affected of the atrophic skin; in some places the papillæ have completely disappeared, in others they are enlarged

Figure 1.

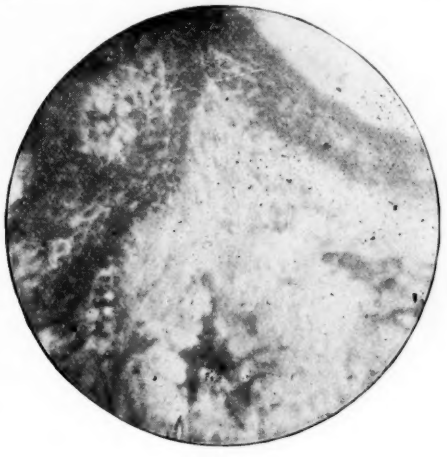

Figure 2.

and of an irregular shape. The papilla appears to be made up of a thick fibrillary substance, which does not react as elastic, but more as a collagenous substance. In some the blood vessels are enlarged and a scanty accumulation of cells can be seen in their composition. Enlarged connective tissue corpuscles are also crowded into the papilla. The fascicles of the fibers forming the stroma of the corion are thicker and crowded together, and are sufficiently stained with orcein and with acid fuchsin, without showing a distinct appearance. The fibrillæ are enlarged and have a kind of wave-like disposition, which reminds one of the structure of the keloid.

Buchwald had already pointed out a swelling of the subepidermic layers, and indeed it seems to me that in this place occur the most important pathologic changes. The fascicles of the fibrillæ of the papillary layer are changed into homogeneous, collagenous fibers. The degenerative changes of these fibrillæ are well demonstrated by Figure 3, a microphotograph from a specimen treated with orcein, polychrome and washed in glycerin and ether, which shows the nuclei and a kind of granoplasma contents of the collagenous tissues (*b*). In this specimen can be seen quite abundant plasma cells (*a*), to the presence of which Unna and Huber have called attention. The infiltration and the plasma cells are more often found around the blood vessels in their adventitia. Multinuclear leucocytes were not found by Krzysztalowicz, and the small infiltrating cells are found (*c*) around the small blood vessels and also between the collagenous fascicles.

In my specimens the blood vessels of the superficial layer of the corion are enlarged, with a thick infiltration around their adventitia and with a swollen endothelium, which is in accordance with the observations of Heller and Huber. Unna states that he found blood vessels enlarged but nearly obliterated on account of a shrinking of their lumen. The sweat glands appear smaller and in an atrophic condition. They are in a horizontal direction, and their excretory ducts can not be seen. I did not find in my specimens follicles of the hair or sebaceous glands. Unna has found the flat muscles of the skin smaller and in atrophic condition; in my specimens also the muscles arrectores pilorum can be seen, but not distinctly. Their condition is subordinate to the degree and to the intensity of the atrophic process of the skin.

In regard to the elastic fibers nearly all authors maintain that they are in an atrophic condition. Colombini pointed out that the elastic fibers in regard to their form, thickness and number were in a regressive proportion, and their atrophy was much more perceptible in the papillary and in the superficial layer of the corion than in the deeper strata. Huber has found a diminution of the elastic fibers in the places showing infiltration. Unna refers to the atrophy of the elastic fibers as a diffuse and irregular one; that they have lost their fibrillary appearance, and that they are thinner and are very weakly stained. I can only confirm the observations referred to, as in our specimens the elastic fibers show very little of their presence, and the whole structure of the corion seems to be made up by abundant, thick and enlarged collagenous fibers.

In some places in the subepidermic layer granules of pigment are found, while no pigment was found in the basal layer of the epidermis.

In regard to the lymphatic spaces, Colombini and Buchwald claim that they are abnormally enlarged. Pospelow claims to have found them normal. Unna has found the lymph spaces nearly normal in the superficial layer of the corion, and greatly enlarged in the deeper layer. In what concerns the nervous system Unna stated that he, like the rest of all authors, has never found any abnormal condition of the nerves. In some of my specimens the nervous ramifications are clearly

perceptible, but they are compressed in a quantity of thick and hard collagenous fibers. In a deformed and enlarged papilla I have found a nerve entering a corpuscle, compressed by the crowding of the thick collagenous fibers. The neurilemma is thickened and the nervous body is elongated and distorted. The cylinder axis is turbid and the nerve fibers are not easily perceptible. The membrane which forms the nervous corpuscle is thickened and covered with infiltrating cells.

The question now is, whether the atrophy of the nervous corpuscles is the consequence of the compression of hardened collagenous tissues on the nervous ramifications, or whether the atrophic condition causes disorders of nutrition in the tissues of the skin, with the resulting pathologic alterations.

We have cases of progressive atrophy of the skin in healthy persons, limited to one part of the body which is supplied by an affected nerve. In these cases the origin of the nervous affection is not from the central organs, but is limited to one, or to one group of peripheral nerves. In one case I have under treatment, of which I show the photograph, the atrophy of the skin took two years to invade the internal surface of the arm and the flexion surface of the forearm, and the affection has been accompanied by intermittent neuralgic pains

Figure 3.

of the brachial plexus. It was nothing else than a case of peripheral neuritis, which caused the atrophic condition of the skin, with a remarkable effusion of the coloring matter of the blood and consequent pigmentation.

The disturbance of the trophic nerves causes hyperemia of the small arteries and stasis of the veins; from this an effusion of serum and of small leucocytes occurs in the tissues and an increased nutrition starts the proliferation of the connective tissue corpuscles. The anomalous hypernutrition causes the hypertrophy of the fascicles of the fibers and gradually their collagenous condition. The thickened and hardened collagenous fibers pressing on the delicate elastic fibers cause their atrophy. The papillæ have disappeared or are atrophic. The nervous terminations, Meissner and Pacinian corpuscles are also atrophied, which explains the benumbing of the sensibility and the alteration of the nutrition of the epidermis. The epidermis derives the nutrition from the papillary layer, which when in an abnormal condition will afford only an abnormal nutrition. For this reason we have seen the epidermic layer compressed and irregularly developed, the excretory ducts of the glands obliterated, the hair and the sebaceous glands disappeared. The pathologic alterations of the epidermis are not the cause of the sclerotic condition of the derma, as Krzysztalowicz is inclined to maintain, but are only the consequence.

Pospelow, Jadassohn, Neuman and Huber refer this affection as a result of trophoneurotic disturbances, and Neuman calls the process "lenticscierenden trophoneurotischen Entzündungs Process." The result of the autopsy of our case upholds the opinion of Neuman, showing the diffuse progressive atrophy of the skin to be the result of the presence of a syphilitic gumma on the junction of the pons and of the medulla pressing on the origin of the seventh and eighth nerves, just at the point which is the center of the vasomotor nerves. That the process is of a chronic inflammatory nature is clearly shown by the clinical symptoms and by the pathologic alterations. The end of the process is the atrophy, which is the consequence of a sclerotic process, the end of the evolution of the chronic trophoneurotic inflammation.

Although we know that this atrophic condition of the skin is the result of an inflammatory process caused by the irritation or the paralysis of the vasomotor center, yet the name of idiopathic must remain, as it occurs primarily in the tissues of the skin without any other progressed process. In this way this atrophy is distinguished from other forms which have been called deuteropathic by Unna, where the sclerosis and the atrophy of the skin is a true cicatrix, the result of an infectious inflammatory process such as the tubercular or syphilitic, which has damaged the stroma of the skin.

The case referred to belongs to the class of skin atrophies which Unna has grouped as those resulting from nervous diseases. Their prognosis is entirely subordinate to the extension and nature of the affection of the nervous system, which in many cases is of such character that therapy does not afford any means of relief.

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DISCUSSION.

DR. W. T. CORLETT, Cleveland—I have seen cases of atrophy of the skin, but never such an extensive case as has been detailed by Dr. Ravogli. Moreover, it is very seldom one gets an opportunity to hold a postmortem examination. Such cases often pass out of the observation of dermatologists, and when death finally occurs the disease may not even be interesting or at all understood by the medical attendant.

DR. W. S. GOTTHEIL, New York—I desire to show some photographs in this connection illustrating a case of progressive idiopathic atrophy, which Dr. Abrahams had intended to exhibit at this meeting. It is a very marked case, involving the

entire skin of both lower limbs up to the middle of the buttocks. The immediately interesting point is the upper advancing margin of the disease, which is erythematous, distinctly inflammatory and tender. As you are well aware, the main point of discussion in connection with this entirely intractable disease has been in regard to its being inflammatory or not in its beginnings. The microscopic findings have been at variance. This case has been distinctly inflammatory along its advancing margins from the very beginning. This settles the question, so far as clinical observation can do so, in certain cases at all events. We propose at a future time to publish the case, and detail the results of the microscopic examination of the skin at the advancing margins.

THE RELATION OF LUPUS ERYTHEMATOSUS TO TUBERCULOSIS.*

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The relation of lupus erythematosus to tuberculosis has long been the subject of a discussion, the final settlement of which we can hardly look for at the present state of our knowledge.

Until more is known of the eruptions which are in some way allied to tuberculosis and which, provisionally, are said to be due to tubercular toxins, and until we obtain more accurate knowledge regarding the cause of lupus erythematosus, our discussions must be of a purely clinical character.

Clinical discussion, although not conclusive, is nevertheless of value, as it eliminates from the controversy many mooted questions, and it renders clinical observation more keen and accurate.

OPINIONS OF VARIOUS WRITERS.

Those who believe that lupus erythematosus is a manifestation of tuberculosis are mostly members of the French school of dermatology. They state that a careful analysis of the family history and a thorough examination of patients will reveal the presence of tuberculosis in most cases.

I have carefully studied the family histories of the cases which have passed under my observation, tracing the history of each and every member of the family, and I have examined my patients for evidences of tuberculosis time and time again, with negative results in the typical cases. I therefore can not recognize the correctness of this assertion.

Kaposi has seen lupus erythematosus in a child of three years, but never in an old person. Besnier[1] says that the reason for this is that these patients die of tuberculosis at an early age, and that they are more apt to succumb to tuberculosis than are cases of lupus vulgaris. Besnier is not entirely right on this point, inasmuch as there are a number of cases on record in which the disease has been observed between the sixtieth and seventieth year of life. Fordyce[2] has reported one case, 70 years of age, where the disease had existed 20 years, and Bronson[3] has reported a case of 93 years.

I believe we lose sight of these patients in many instances, not because they die of tuberculosis, but because, after consulting one physician after another, they give up all hope of being cured and discontinue treatment.

THE AUTHOR'S BELIEF.

Following the leadership of Robinson,[4] I believe that typical discoid lupus erythematosus of the face is a local skin disease, coming under the general classification granulomata, and having nothing whatever to do with tuberculosis.

The reason that the correctness of Robinson's position on this subject is not generally accepted is, in my opinion, due to the fact that those who believe that lupus erythematosus is a manifestation of tuberculosis do not sufficiently separate the typical discoid form of the face from other varieties.

For the purpose of studying the tubercular question here involved, we would exclude all cases of acute lupus erythematosus, all atypical cases, all cases of folliclis* and all cases of lupus erythematosus disseminatus.

NARRATION OF TWO CASES.

A few years ago a patient, aged 40, consulted me for alopecia areata, which had developed during the preceding two months. He was a politician, and had just been through a heated political campaign. The areas of alopecia were four in number. They were each the size of a quarter of a dollar, and of oval form. There was no redness or scaliness of the surface. In the older of these plaques there was a central depressed atrophic scar, which caused me to make the probable diagnosis lupus erythematosus of the scalp. The patient's pulse was 90; the temperature was normal. Examination of the lungs negative. He had no cough or expectoration, and no eruption on any other part of the body. He was advised to take a complete rest, which he did. Three weeks later, on his return to the city, he was again examined. His pulse was still 90; he had a little evening temperature, and we detected râles in the apex of one lung. He was referred to a specialist on lung diseases, who confirmed our diagnosis of tuberculosis of the apex of the right lung. The patient was sent to California, where he died of tuberculosis within a year.

Lilienthal[5] has reported the following case: The patient is 46 years old; previously healthy. Six months ago an eruption appeared on the ear, and later spread to the face, scalp and under extremities, accompanied by fever and rapid emaciation. On the nose is a plaque, with no scaliness; in the scalp are areas of alopecia with atrophy of the hairs. On the fingers are typical lesions of lupus erythematosus disseminatus. At first there was no evidence of tuberculosis of the lungs, but after a time the patient took cold, and on his recovery from this the apex of one lung was found to be infiltrated, and a new eruption of the disease occurred on the back.

THE BASIS OF THE TUBERCULAR THEORY.

It is possible that toxins of tuberculosis cause alopecia with atrophy, just as toxins of syphilis, typhoid fever and puerperal fever cause alopecia without atrophy.

Cases like these, in which a rapidly developing tuberculosis follows the first manifestations of lupus erythematosus, have been reported by many observers, and they impress everyone as being cases in which the lupus erythematosus is a manifestation of tuberculosis rather than the accidental presence of two diseases in the same individual. It is the observation of these cases which forms the basis of the tubercular theory.

They have nothing whatsoever to do with the granuloma lupus erythematosus, although in many instances they cannot be separated from the granuloma. They are, in my opinion, cases of folliclis, that is, eruptions which are in some way related to tuberculosis, without showing, up to the present time, the presence of the tubercle bacillus or the structure of the tubercle.

Erythema multiforme is to-day regarded by many as being both an acute infectious disease and also a symptomatic eruption. I believe the same is true of lupus erythematosus. There is a disease, lupus erythematosus, *sui generis,* and also a symptomatic eruption related in some way to tuberculosis.

Brocq[6] believes that most cases of lupus erythematosus

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* The word folliclis is a French term which was first applied to these eruptions by Barthelmy in 1891. It has many synonyms.

are due to tuberculosis, but that some cases are due to other causes. Roth[7] states that H. Hebra and Jemieson hold that the disease is caused by different etiologic factors. Hardaway[8] believes that the disease is due to more than one cause, and Galloway[9] says tuberculosis is only one cause of the disease.

THIS DISEASE SIMULATES OTHERS.

Crocker[10] is right in saying that lupus erythematosus is a great imitator of other diseases. There is, however, no class of cases which it so closely imitates as those eruptions which are in some way related to tuberculosis, and which many believe are due to tubercular toxins.

Nobl[11] says that lupus erythematosus disseminatus is the same as folliclis. Were this invariably the rule the division of the cases would be extremely simple—the disseminate form would be tuberculosis, and the discoid form would be the granuloma. The difficulty, in my judgment, lies in the fact that the granuloma may produce a disseminate eruption and folliclis may produce the discoid form; hence, in many instances, it is impossible to separate the two forms, but even at the present state of our knowledge I believe that the two forms may sometimes be differentiated.

Lilienthal states that, in 1872, Kaposi pointed out the fact that when pulmonary manifestations appear the disease quickly spreads, and that, in 1893, Veiel said that the disseminate form was certainly tubercular, and that he found tuberculosis in one-third of his cases of this variety.

Another point of importance in the differential diagnosis is the fact that a study of the tubercular cases shows that they are made up of plaques, one or two of which are typical, and the remaining are atypical.

Inasmuch as folliclis so closely resembles lupus erythematosus and inasmuch as Boeck believes that folliclis is a subdivision of lupus erythematosus, it is necessary to consider certain points which it presents in a study of the relation of lupus erythematosus to tuberculosis.

The present tendency of dermatology is to include the cold abscess, subcutaneous tuberculosis or scrofulotubercular gumma (using these terms synonymously) in the group of folliclis. This, in my opinion, is absolutely incorrect, there is no reason for changing the old classification, "subcutaneous tuberculosis"; in fact, I extend this group, which shows the structure of the tubercle and the presence of the tubercle bacillus and include in it certain cases which are, to-day, classified under other headings.

WHO FIRST DESCRIBED FOLLICLIS.

Toeroek says that the first case of this class of which there is any record is a case reported by Hutchinson in 1879. The second case was reported by Boeck, as a case of lupus erythematosus disseminatus. He sustains the claim of Brocq, that he was the first to describe the disease. These authorities entirely disregard American literature on this subject. It was Duhring, and not Brocq, who first described folliclis under the title, "Small Pustular Scrofuloderm."

My reasons for assigning to Duhring the credit of first describing this disease are as follows: Boeck[13] says that the case which was reported by Bronson in 1891 as a case of acne varioliformis of the extremities was a case of folliclis. Toeroek says it was a case of acnitis of Barthelmy and Dubreuilh believes that both Bronson's case and Pollitzer's case of hydro-adenitis destruens suppurativa belong to the same group as Barthelmy's case. Inasmuch as these authorities believe that hydro-adenitis destruens suppurativa and acnitis are synonyms of folliclis, it will be seen that they agree that Bronson's case was a case of folliclis. In the discussion of Bronson's case Fox[14] spoke of a similar case, shown some time ago, which he had diagnosed acne cachectecorum. Jackson said that the case more closely resembled the pustular scrofuloderm of Duhring. Taylor had seen an eruption similar to this in late syphilis.

As near as can be judged from a description, Jackson is correct in saying that this case is a case of "the small pustular scrofuloderm," first described by Duhring[14 1-2] in 1881. Brocq[15] published his description about 1890, and it corresponds to that of Duhring's as closely as two descriptions independently written ever do.

SITE OF THE ORIGIN OF THE DISEASE.

In two of the cases of folliclis which have been reported (cases of Brocq and Hallopeau), the lesions of folliclis were present on the extremities, and typical lesions of lupus erythematosus were present on the hands.

Dubreuilh, Broeck and Toeroek regard this as the accidental presence of two diseases in the same individual. Toeroek bases his opinion to a great extent on the microscopic findings. He says: "The microscopic findings show, as a difference from lupus erythematosus, the presence of an endophlebitis and thrombosis of the veins on the border of the derma and subcutaneous tissue, as well as a beginning of a necrotic process in the same location in dermatitis nodularis necrotica." He disregards the fact that Gerber and Leloir have stated that lupus erythematosus begins in an alteration of the blood vessels of the papillæ and corium and that Boeck, Holder and Petrini have found thrombi in the vessels.

Pick, the most recent of all writers, says: "Regarding the first appearance of the disease, I agree with Miethke, Schoonheid and others, that the disease begins in the subcapillary vascular layer of the skin. On the border of the lesion we find, first of all, the vessels are dilated and surrounded by a small cell infiltration, which follows the vessels as they ascend into the papillæ."

Hallopeau[16] believes that these cases of a combination of lupus erythematosus and folliclis are different manifestations of the same morbid process, and that they are either cases of abnormal lupus erythematosus, folliclis or new morbid type.

We side with Hallopeau, but we would exclude the new morbid type; were we to believe that these combination cases are abnormal forms of lupus erythematosus, then all folliclis are lupus erythematosus, and that would extend lupus erythematosus *ad infinitum,* and it would be easy to establish a relationship between lupus and tuberculosis by statistics.

If, on the other hand, we believe that tuberculosis may produce both folliclis and symptomatic lupus erythematosus, we have an explanation which is more satisfactory.

Combinations of lupus erythematosus with folliclis, with lupus vulgaris, with rare forms of tuberculosis, with subcutaneous tuberculosis and with pulmonary tuberculosis are, in my opinion, one and all of them cases of tuberculosis, in which one or two patches are lesions of symptomatic lupus erythematosus.

REASONS FOR DIFFERENCE OF OPINION.

With this method of looking at lupus erythematosus in mind, permit me to direct your attention to an article, published by Roth[17] in 1900. He collected from the literature and from the private and clinical practice of Herxheimer, 250 cases of lupus erythematosus, of which 185 cases showed evidences of tuberculosis, and he concludes that there can be no question whatsoever of the relation of the two conditions.

He finds evidences of tuberculosis in 63 per cent. of his cases, which is the highest per cent. yet attained by any observer.

Wherein lies the difference of opinion?

We respectfully submit that the typical cases do not find their way into medical literature, hence statistics founded on reported cases are based, not on the typical, but on the atypical cases.

ROTH'S CLASSIFICATION.

Roth divides his cases into classes. Class A contains 12 cases, reported by Boeck, who states that they are cases of folliclis. As our present knowledge of folliclis is so meager that their exact relationship to tuberculosis is not yet established to the complete satisfaction of many leaders of the profession, and as there are but few who believe that they are in any way related to lupus erythematosus, they should not be employed to bolster up the doctrine that lupus erythematosus is tuberculosis. Class B contains 30 cases of discoid lupus erythematosus in which the glands of the neck were enlarged, also reported by Boeck.

Pick shows that lupus erythematosus may produce an enlargement of the glands of the neck without there being any evidence that the enlargement is due to tuberculosis, and we object to drawing conclusions from the presence of enlargement of the glands of the neck, even where they are tubercular, unless the number of cases observed at the same period of time, in which there was no enlargement, be stated.

Class C contains 81 cases, collected from the literature as reported by various writers. This class consists of a heterogeneous collection of dermatologic curiosities; some of the cases of this class are cases of folliclis, others are cases the diagnosis of which was questioned when they were presented before medical societies. One of them is a case of erysipelas perstans fascei, of Kaposi. They should one and all be excluded from the statistics.

In fact, the only part of Roth's statistics of any value are the cases which he presents from Herxheimer's clinic, of which there are 138 cases, with evidence of tuberculosis in 36, or 26 per cent., as follows: Tuberculosis of the lungs, 9 cases; enlarged glands in the neck, 9; one or more relatives died of tuberculosis, 6; carious bone removed in childhood, 1; glandular scars in the neck, 2; cough and expectoration, 3; tuberculosis of the testicle, 1; lupus erythematosus transformed in lupus vulgaris, 1; previous inflammation of foot, necessitating amputation, 1; reaction to tuberculin, 1; previous symptoms of tuberculosis, 2.

Roth was quickly answered by Dr. Pick[17], of Neisser's clinic, who reported 43 cases of discoid lupus erythematosus, 18 of which, or 43 per cent., showed evidences of tuberculosis, as follows: Tuberculosis of the lungs, 5 cases; relatives died of tuberculosis, 6; enlarged glands in the neck, 6; tuberculosis of the hip joint, 1.

From this it will be seen that the statistics of Herxheimer's clinic show a smaller proportion of tuberculosis than the statistics from Neisser's clinic.

CONCLUSIONS OF THE AUTHOR.

My conclusions are:

1. That discoid lupus erythematosus is a granuloma, which has no relation whatsoever to tuberculosis, but which may be accompanied by a general eruption.

2. That tuberculosis may produce symptomatic lupus erythematosus, usually with disseminate, atypical plaques.

3. That what may be shown by statistics regarding the relation of lupus erythematosus to tuberculosis depends on what is understood as evidence of tuberculosis, and also on what is included in lupus erythematosus.

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DISCUSSION.

DR. M. B. HARTZELL, Philadelphia—I wish to ask the writer of the paper what is his authority for asserting that tuberculosis may give rise to symptomatic erythematous lupus.

DR. F. H. MONTGOMERY, Chicago—I think the most of us agree with the writer that ordinary discoid lupus erythematosus is not, as a rule, associated with tuberculosis. There are undoubtedly some exceptions and occasionally a case is seen in which there is apparently a close relation between lupus erythematosus and lupus vulgaris. I remember very distinctly one clinical case which Dr. Hyde and I treated for a number of years for typical lupus erythematosus of the face, scalp, and ears. After disappearing from our observation for a year or two, the patient returned with a typical lupus vulgaris of the nose, producing almost complete destruction of one ala. In a scraping from one of the nodules tubercle bacilli were found.

DR. R. R. CAMPBELL, Chicago—I thoroughly believe lupus erythematosus is not a tubercular disease. And if the statement as made by Dr. Jackson, that it is not an inflammatory disease, can be demonstrated, then I think we will have conclusive evidence that it is not tuberculous, because where we have tuberculosis we have an inflammatory condition present. The question might arise as to what constitutes an inflammatory condition. If we simply mean a process characterized by cell and tissue change then we must acknowledge lupus erythematosus to be an inflammatory disease. I am inclined to the belief that in a great many cases lupus erythematosus is due to a toxemia generated as a result of an illy defined or latent tubercular process, existing in the patient, in some portion of the body distant from the seat of the lupus erythematosus.

DR. W. T. CORLETT, Cleveland—Speaking from a clinical standpoint I have never been able to associate lupus erythematosus with tuberculosis, and lupus erythematosus is a comparatively common disease. I have seen many cases which were looked on as peculiar manifestations of lupus erythematosus by others, but it was not patent to me. Neither can I agree with the last speaker, that lupus erythematosus is a product of the tubercle bacillus, because, as I have said, in my own cases I have not been able to associate lupus erythematosus in any way with tuberculosis.

DR. L. WEISS, New York—In 1890, when Koch's lymph came into use and for the study of which I happened to be on the other side of the ocean—as is the case now with the *x*-rays—we tried to enlarge its use and to apply it to several skin conditions. So it came that tuberculin was used tentatively in many skin diseases, and Dr. Buzzi of Berlin and myself made a few tuberculin tests at Professor Schweninger's clinic, by inoculating several lupus erythematosus cases and two cases of lichen scrofulosorum. One of the latter reacted and of the half dozen lupus erythematosus cases three reacted. In one case a history of remote tuberculosis in the family could be ascertained, but in the other two cases there was none. It seems to me, therefore, that lupus erythematosus must have some connection, at least in some cases, with tuberculosis, and the contention of Dr. Campbell, that toxemia of tuberculosis may in

some unknown way cause a modified tuberculosis and an eruption of lupus erythematosus, is quite tenable after what these injections of tuberculin have taught us.

DR. L. DUNCAN BULKLEY, New York—In regard to the age of patients with lupus erythematosus, I certainly do not believe that the young average observed is owing to the early death of many of these patients by tuberculosis. I believe that it is rather due to the fact that the disease is prone to develop in early life, and then after some attempts at treatment, if not speedily cured, the patients give up, and do not seek further medical aid. I have certainly seen patients 60 years old with lupus erythematosus, and I have watched patients with the eruption for many years. I have had the subject of tuberculosis under thought since a possible connection was first suggested, and have repeatedly examined patients for evidences of the same, in vain. I recall only one patient who had lupus erythematosus, who died of tuberculosis; and this among many hundreds of cases in public and private practice.

DR. M. L. HEIDINGSFELD, Cincinnati—I am by no means favorably impressed with any effort to bring tuberculosis in causal relation with lupus erythematosus. I believe both clinically and histologically the types are separate and distinct forms of dermatoses, easily recognizable and distinguishable from each other. A few cases may have had both affections coincidentally associated, but I believe that the transitional forms, from one to the other, mentioned by Roth and others, have been largely errors in diagnosis, the affection being one or the other, *ab initio*. Personal experience in one or two instances strengthens me in this opinion. I concur with Pick, who states that we are not justified in bringing tuberculosis and lupus erythematosus in causal relation.

DR. J. FRANK WALLIS, Philadelphia—I would like to ask the Doctor in regard to those scrofula cases, whether in their history and in others he has found inoculation to prove that they are tubercular. I have had under my care the past year five or six cases, four in one family. There is no history of tuberculosis. Two other cases that came up later had the same affection, but no history of tuberculosis, and I wondered if any inoculation had been made in any of the cases reported. The cases are still under observation.

DR. H. W. STELWAGON, Philadelphia—I am surprised that the experience of those present is so different from my own, as in the large majority of my cases it has occurred in tuberculous families. I have never seen a case demonstrated as tuberculosis, but I have been thoroughly impressed with the history given me in my cases that tuberculosis has existed in one or more of the remote members of the family, and I think there is a good deal of clinical evidence in medical literature in the same direction.

DR. ANTHONY—In answer to Dr. Hartzell's question, if these cases are included, then tuberculosis is present in 70 per cent. of the cases; if excluded, then tuberculosis is present in about 33 per cent. of the cases where every possible evidence of tuberculosis is considered, such as the death of a relative from tuberculosis, scars in the neck from scrofula in childhood, bone disease of childhood, reaction to Koch's lymph, etc. Where these doubtful evidences of tuberculosis are disregarded, the percentage is much less than 33 per cent.

The cases which I would exclude are those like the following one of Boeck's cases: The axillary glands were removed and found to be tubercular; shortly afterward there appeared on each cheek a sharply defined, symmetrical erythema, which was diagnosed as erythema lupinosum, a transitory erythema which is not the same as lupus erythematosus. Six months later the patient had a swelling of the forearm which the attending physician supposed to be erysipelas, but which proved to be a tubercular periostitis. Then she had the eruption of folliclis on the arms and forehead, next erythematous plaques on the face, and lastly, more than a year after the beginning of the disease, two small plaques of lupus erythematosus behind the ear.

These two small plaques are permitted to dominate the entire clinical picture; they give a name to the disease and furnish one more case to swell the statistics in proof of the assertion that lupus erythematosus is tubercular.

To my mind these are cases in which tuberculosis produces, among a great variety of lesions, one or two lesions which at the present state of our knowledge can not be distinguished from lupus erythematosus either clinically or microscopically. There are very few cases on record in which there was present in the same patient lupus vulgaris and lupus erythematosus. Brocy has reported one such case.

THE ETIOLOGY OF ACUTE ARTICULAR RHEUMATISM.*

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At the outset, while it may seem trite, it may be well to define the sense in which the term etiology is used as well as to indicate what is meant by the term rheumatism. We here employ the term cause in the same sense as we do in typhoid fever, pneumonia, pulmonary tuberculosis, etc., in which we recognize that aside from the infective agent there must be what some have called the soil, susceptibility to infection varying from extreme susceptibility on the one hand to complete immunity on the other; and that the latter may for certain animals and diseases be variable in degree and also either hereditary or acquired.

In order to limit discussion the term rheumatism will be confined to those cases of non-suppurative arthritis occurring especially in children, but which also occur in the adult. This is the view of Poynton and Paine.[1] They say: "All suppurative arthritis must, we think, be excluded. There may be very possibly a suppurative form of rheumatic arthritis; there may, indeed, be rheumatic suppuration as there are pneumococcus suppurations, but as yet all suppurative conditions must be set aside as a basis for investigation."

We may start with the postulate that it is always an infection. If proof of this be demanded it may be found in the work of Fraenkel[2] in 1892, Sahli[3] in the same year, Lanz[4] in 1893, Singer[5] in 1894, Dana[6] in 1894, Lubarsch in 1896, Achalme in 1891[7] and 1897,[8] Triboulet[9] and Coyon in 1898, Wasserman, Poynton and Paine[10] in 1900, Meyer[11] in 1901, Menzer[12] in 1901, Predtechensky[13] in the same year. A study of this literature shows that there are four principal views in regard to the bacteriology of acute articular rheumatism.

THE THEORY OF A MODIFIED PYEMIA.

The view of Gustav Singer, first published in 1898, is that it is not a distinct disease, but due to streptococcal or staphylococcal infection; in other words, a modified pyemia. This view he again defends vigorously in a recent communication,[14] in which he holds that in the face of his evidence the search for a specific organism is futile. He maintains that the diplococcus previously described by Wasserman, Meyer, Poynton and Paine and others is nothing but the *Streptococcus pyogenes*. He further maintains[15] that polyarthritis is only an occasional occurrence in rheumatism and that rheumatism can not be produced in lower animals. He claims that because of the peculiarity of the circulation of the joints they may be affected by a degree of virulence less than that required to produce a pyemia and that this attenuation is brought about by passage through the adenoid tissues of the throat. The objections to Singer's views are briefly as follows:

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* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. Frank A. Jones, George Dock and J. M. Anders.

1. His results have not been confirmed by other observers, especially by Poynton and Paine.

2. He has not demonstrated the organisms in the joints, but only in the heart and lungs.

3. As so well stated by Poynton and Paine,[16] in the five last cases reported by him, the strepto-diplococci were demonstrated in, and isolated from, the tissues, but no experiments were recorded. They say: "This organism Singer calls the *Streptococcus pyogenes* on account of the morphological and cultural characters. Yet the lesions were non-suppurative and our present knowledge of the morphology and cultural characters of several organisms in the coccus group make any assertions on these grounds as to their exact nature a very doubtful proceeding."

4. He does not admit that rheumatism can be experimentally produced in the lower animals.

5. It does not seem reasonable to suppose that micro-organisms which so frequently cause suppuration should be so uniformly attenuated as to always produce such constant and uniform phenomena and always without suppuration.

6. It does not seem quite reasonable to argue that these joints are more vulnerable because of their lessened resistance, and that yet they are as likely as any other structures to be affected by a virulent culture.

7. His hypothesis must carry with it the idea of a constitutional predisposition to suppurative infections.

8. If due to streptococcus infection, the use of the antistreptococcus serum ought to be curative or at least helpful.

ACHALME'S SPECIFIC GERM THEORY.

The seeond view is that of Achalme,[17] that acute articular rheumatism is the result of infection by a specific anaërobic bacillus which is of large size and possessed of remarkably variable morphologic characteristics. In the papers published in 1891 and 1895 he claimed that the organism is found with constancy, and that rheumatic fever was produced by it in rabbits. Poynton and Paine[18] failed to confirm the results of Achalme, but found a bacillus similar to the one described by him, which they found to be the lactic acid bacillus. Since then they carefully sterilized their media and incubated it over night.

Fullerton[21] expresses the belief that Achalme's work was not well done and that it was most improbable that the organisms which he describes has anything to do with the disease. Rist[19] says "that the organism described by Achalme has been found very often in a number of cases, pathologic or not, where rheumatism was out of the question."

Achalme now reviews[20] his former work and states his belief that his bacillus is to be found in the healthy individual and that it is an ordinary saprophyte whose development in the blood is favorably influenced by the action of heat or cold.

THE THEORY OF VARIED INFECTIONS.

The third view is that acute rheumatic fever is not due to any particular organism, but is a particular reaction to varied infections. In other words, that we may have a uniformity of lesions with a multiplicity of causes. This is too general and includes too much. It makes rheumatism a synonym of arthritis. For example, it is well known that the gonococcus, the pneumococcus, the bacillus of tuberculosis, or the staphylococcus may cause arthritis, and yet we no longer call these cases rheumatic. Gradually there is being formed a rather larger class of cases designated as arthritis, to which the appropriate descriptive adjective is prefixed, as gonorrheal arthritis, pneumococcus arthritis, tuberculous arthritis, etc. If this is followed out to its legitimate conclusion it will be a question of simply calling all inflammatory affections of the joints arthritis and then determining the particular organism causing the inflammation. If it shall be found that all those cases of non-suppurative inflammation of a constant type are always due to a specific germ, then for these the term rheumatism may be reserved, but there is no particular advantage in doing so.

THE DIPLOCOCCUS OF POYNTON AND PAINE.

The fourth view is that of Poynton and Paine. In January, 1899, Poynton and Paine[22] undertook the study of the bacteriology of rheumatism with the intention, if possible, of confirming the results of Achalme. In this they failed and abandoned the attempt. In eight successive cases, however, they obtained a diplococcus which grew in streptococcal chains, which did not thrive on ordinary agar or on serum agar, grew indifferently on blood agar and appeared to grow best in a liquid medium of milk and bouillon, rendered slightly acid with lactic acid. These organisms were isolated in pure culture on three occasions, from the blood of patients during life who were suffering from acute rheumatic pericarditis; also from the pericardial fluid after death, from the valves of the heart and the throat of the patient; fragments of granulation from the valves of the heart of human beings, and also from the joint exudation, heart-blood, urine from the bladder and cerebro-spinal fluid of inoculated rabbits.

These organisms when inoculated into rabbits produce polyarthritis, bursitis and tenosynovitis, multiple non-suppurative valvulitis and pericarditis, plastic pleurisy and pneumonia, a condition of the myocardium analogous to that found in the human heart as a result of rheumatic carditis. There are multiple joint swellings, wasting and pyrexia, thus closely simulating rheumatism in the human being.

When these organisms are passed from animal to animal similar symptoms are produced, but there is a tendency to increase in the severity of the cardiac with lessened severity of the arthritic lesions. The organisms were found, not on the surface, but in the interior of the valves. In one case of chorea the diplococci were found in the perivascular lymph spaces and capillaries of the pia mater and in some parts of the motor areas of the brain.

In September, 1901, they reviewed[23] the bacteriology of the disease and brought the number of cases up to eighteen. They take the ground that rheumatism is not only an infectious disease, but that it is due to a diplococcus infection, and point out emphatically that "the most ardent bacteriologist does not pretend that the presence of a micro-organism explains all the phenomena of rheumatic fever."

The organism described by Poynton and Paine is undoubtedly the same as that previously described by Triboulet[24] in 1898, and Apert and Triboulet in the same year and by Wasserman and Malkoff[25] in 1899. Litten, as the result of the study of two cases and the inoculation of many guinea-pigs, says[26] that he sees no reason why the diplo-streptococcus should not be regarded as the cause of acute articular rheumatism.

Perhaps the views of Pribram[27] should be mentioned. He maintains that in most cases cultures from the joints and blood are sterile and that where micro-organisms are present they are due to secondary infection, predisposed to by the damaged joint.

The fact that micro-organisms are not found in the exudate in the joint is not against the infection theory. It is exceedingly difficult and sometimes impossible to demonstrate the tubercle bacilli in tuberculous effusions. So generally is this recognized that their absence is considered diagnostic of the tuberculous origin of the disease. Indeed, in these cases of rheumatism the germs are found in the articular structures, in the structure of the valves and vegetations, and it is only in those cases in which they come to the surface in large numbers that the name ulcerative or malignant endocarditis occurs and that many minute emboli are formed.

According to Hamburger[28] the bactericidal power of venous is much greater than that of arterial blood. Consequently, we find endocarditis in the left side of the heart because of its arterial blood. It is well known that the venous engorgement of valvular disease, especially mitral disease, affords almost complete immunity against pulmonary tuberculosis. A large percentage of diabetic patients die of tuberculosis because the formation of sugar restricts the formation of carbonic acid.

Brandenburg[29] has shown that alkali occurs in the blood in two forms, that combined with carbon dioxid and that combined with albumin. The latter are very tenacious of their alkali and the bactericidal properties of the blood are augmented by increasing the amount of diffusible alkali in it. Hamberger found that after determining the bactericidal power of the blood, the addition of carbon dioxid releases the alkali from the albumin, increasing the proportion of the alkali, and this augmented alkali tension markedly increases the bactericidal properties of the blood. He suggests that acid intoxications induce variations in the alkali tension. Hegeler, Tsuboi and Stemmetz long ago showed[30] that the bactericidal action of serum which has been heated to 55 C. is restored by adding highly diluted alkali.

CONCLUSIONS.

1. Many organisms produce arthritis.

2. Probably all cases of acute articular rheumatism are due to infection.

3. Probably all organisms known to cause either acute articular rheumatism or other forms of arthritis also give rise to other pathologic conditions as well.

4. It would thus seem to be not merely a local infection or inflammation, but a general infection, the commonest seat of the principal lesion being the joints, but also involving the heart, both endocardium, pericardium and muscle, occasionally the meninges and other structures and caused by a diplococcus circulating freely in the blood. The diplococcus seems to be merely a germ capable of causing widespread inflammation, and the joints are included in its sphere of action. Just as in pneumonia, we may have a general infection with local manifestations or inflammatory reaction in the meninges, the pleura, the endocardium, pericardium, post-nasal space, peritoneum, lymphatics and lungs, the latter being probably the usual site of the localizing inflammation.

5. It is quite possible that there is some hereditary diathetic or constitutional peculiarity, the nature of which is completely unknown to us, which may favor infections in general, and possibly that of rheumatic infection in particular.

6. That there may be varying degrees of susceptibility depending on exhaustion, depressing influences, as cold and the like, seems reasonable. These are the occasions and not causes. They favor but do not cause.

7. That susceptibility varies greatly there can be no doubt. Whether this depends on alkali tension has not yet been demonstrated, but it seems plausible on the ground of variation in the bactericidal action of the blood. This may explain the value of alkalies in the treatment of rheumatic affections.

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DISCUSSION.

DR. HEINRICH STERN, New York—The diversity of the methods employed and the contradictory findings of the various investigators clearly demonstrate that in spite of an apparent clinical justification the supposition of a microbic causation of rheumatic fever is in reality based more on speculation than on facts. Achalme's results are directly contradicted by those of Westphal, Wassermann, Malkoff, Meyer, Predtetchensky and others. Sawthenkow, on the other hand, obtained the same results as Achalme, namely, a specific bacillus. Dr. Webster, if I am not mistaken, made liberal use of the articles of Poynton and Paine. In my estimation it is the easiest thing in the world to be a follower of the theory of bacterial origin of disease. It is convenient and for the time being, at least, it is made to serve a certain purpose. The bacterial theory of the causation of rheumatic fever has relegated to oblivion the old lactic acid theory. Who yet believes in the lactic acid foundation of acute articular rheumatism? If we want to determine the cause of acute articular rheumatism I think we must start from a different point altogether. In those affected with the disease we find two pronounced abnormalities in the blood and the urine. This is, firstly, the increased fibrin formation, and secondly, the deficient output of chlorids. This is the basis on which we should work. Where does the fibrin come from; how did it originate? We know there is an intravascular formation and accumulation of fibrin in acute articular rheumatism. This can only be brought about by the presence of fibrinogen and some salts of calcium. The third factor essential to the formation of fibrin does not interest us at the present moment, and I abstain from mentioning the different contentions as to its nature. We can not have thrombosis or intravascular fibrin formation unless the calcium factor works together with prothrombin and the third factor. Looking now for the anatomic substratum of the affection, we will find that the only tissue involved is white fibrous tissue, principally that of joints. The changes found in the inelastic fibrous texture are the same whether they are located in the articulations themselves, in the adjacent structures, or in the heart. White fibrous tissue is found more particularly in those parts habitually used in locomotion. White fibrous tissue is made up of bundles of fibers held together by an agglutinating substance.

Lime or baryta water, or other weak alkalies affect this cementing material. The alkalies may dissolve the cement completely out of the texture. Now it is possible that the calcium salts which bring about intravascular fibrin formation which at this period exists either in larger quantities in the organism or exerts an increased reactivity, also causes the extraction of the agglutinating material from the white fibrous texture. As a natural result of the lesions in the membranes thus produced we will have a disturbance of the osmotic equilibrium, that is, material will pass through the seat of injury which could not penetrate or diffuse through the normal tissue. The deficiency of urinary chlorids may be also explained in this way. The accumulation of ectogenous material in the synovial sacs, the inflammation of the membranes and structures making up the articulations, and all other phenomena of acute articular rheumatism can be explained by the existence of such a lesion in the white fibrous structure.

DR. FRANK BILLINGS, Chicago—Why is it self-limited?

DR. STERN.—That is easily explained. A given case of acute articular rheumatism is dependent either on the degree of the anatomic lesion and the activity of the fibrin-calcium factors or on the calcium material alone. However this may be, the attack will continue as long as the reactivity of the calcium factors continues. The abrupt onset of the affection, its shifting character, etc.—these and all other pertaining characteristics of acute articular rheumatism are better understood on the basis of this physico-chemical substratum than by taking refuge to pathogenic micro-organisms whose influence as regards production of rheumatic fever, with all due deference to the various observers, has not as yet been demonstrated to me.

DR. J. M. ANDERS, Philadelphia—There is perhaps a unity of opinion that we know little about the so-called arthropathies and in cases of acute articular rheumatism we have instances that belong clearly to the intoxications or infections. As you know, we class both under one large head, acute infectious disease or acute infections. The specific micro-organism may be seen; still, I do not see why they should not be multiple as in ulcerative endocarditis or pneumonia. I do not believe that, at the present day, we can definitely say that any special micro-organism is a constant cause of the disease.

One theory regarding this affection has not been mentioned by Dr. Webster, and that is that the symptoms may sometimes be classed with gout, both being due to a prolonged intaking of proteids and carbohydrates in excess. Again, other determining factors may be absorbed from the alimentary canal, resulting from the action of bacteria on proteids. Still, I think this view simply explains the predisposing, rather than the specific cause of the disease. To my mind, acute articular rheumatism is a disease entity; there is no difficulty in recognizing this in its more typical phases. In the typical forms, and in chronic rheumatism, all probably of some specific nature, we are constantly confused with other forms of arthritis and I know of no way to discriminate these clinically. We should attempt, by every therapeutic resource known, to separate acute articular rheumatism from gonorrheal rheumatism; this is usually easy. We should also separate it from acute polyarthritis and gout. In many instances the tophi in the ears will be of great value in discriminating between them. To discriminate between the two diseases clinically is oftentimes not very difficult. Symptoms of purpura occurring in connection with acute articular rheumatism I believe are not common; when it does occur what is the interpretation? It is probably a toxic purpura, yet it may be due to emboli. Quite recently I saw an instance of acute rheumatism, of typical form, in which purpura developed. Here we are confronted with the question, are they *Peliosis rheumatica*, or Schönlein's disease? Polyarthritis and purpura and wheels guide us in making a diagnosis of acute articular rheumatism. *Peliosis rheumatica* is of rheumatic origin, it is stated. I can not ascribe to this view because the cases that I have seen did not show any cardiac complications. Cardiac complications occur so rarely in *Peliosis rheumatica* that it tends to show that it has a different etiology. I see no more reason for speaking of rheumatic diathesis than for speaking of pneumonic diathesis, or of influenza diathesis. I think such a term is obsolete.

DR. WEBSTER, in closing—Dr. Stern says I claim this to be a type of infection and that I have no reason for such a claim. I said in my paper that an organism had been found which we believed to be at least one of the causes of the disease; that this organism had been found in the blood, in the heart, in exudations in joints, and in various other structures and fluids in the body in both the human being and in the lower animals. These organisms taken from the human being have been inoculated in animals and produced identical lesions in them. If carried through a series of animals the arthritic phenomena were again produced in them. If anyone is not convinced by such evidence, I do not know what evidence is called for; I think it is sufficient to convince anybody. With regard to the calcium salts, etc., I have not gone into this part of the subject. The bactericidal powers of the blood are well known, but the Doctor does not demonstrate anything to us; he has been giving us theories; what I have given has been demonstrated.

ETIOLOGY AND PROPHYLAXIS OF THE CARDIAC MANIFESTATIONS OF ARTICULAR RHEUMATISM.*

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The scope of this paper is limited to the consideration of two phases of rheumatic cardiopathies which, notwithstanding the relative frequent occurrence of these manifestations and their great importance because of their far-reaching effects, have, until a recent period, been almost as imperfectly determined in the one case and ineffectually managed in the other as when Pitcairn, in 1788, noticed the connection between rheumatism and pericarditis, a relation more fully explained by Dundas, Wells and Latham, or when Baillie and Kreisig observed the association of acute rheumatism and endocarditis, the definite connection of which was shown by Bouillaud, who also introduced the term endocarditis.

RHEUMATISM AS A FACTOR IN HEART DISEASE.

Among the extrinsic causes of diseases of the heart rheumatism has long held the most important position. It has gradually absorbed into its etiologic relations the so-called idiopathic inflammations of the pericardium and endocardium, and even certain myocardial conditions of an acute nature. It is even admitted that many of the so-called hereditary diseases of the heart are probably of rheumatic origin, while it is generally conceded that those cardiopathies of early life which obtain with the entire absence of clinical history, or, at most, an indefinite mention of "growing pains," are of rheumatic origin. In several hundred ambulatory cases of acute and chronic disease of the heart observed during the last ten years, fully 30 per cent. failed absolutely to give any history of rheumatic manifestations, though usually some such history could be traced in the parents or other members of the family. In those presenting primary conditions or exacerbations of chronic states the exhibition of rheumatic remedies invariably gave relief. Sansom believes that practically all cases of heart disease in individuals under 35 years of age are rheumatic, and that practically all fetal endocarditis is rheumatic.

THE ETIOLOGY OBSCURE.

The exact etiologic nature of the relation of cardiac disease to rheumatism has long been in discussion.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. Frank A. Jones, George Dock and J. M. Anders.

With the abandonment of the humoral and nervous theories of the nature of rheumatism, and the growth of its recognition as a distinct morbid entity of infectious nature resembling rather closely pyemic conditions and possibly depending on a specific organism, there developed the belief that the cardiac manifestations of acute rheumatism were, as expressed by Dreshfield in regard to endocarditis, not a complication or sequel, but an integral part of the disease. Whether as such the cause lies in the direct local action of a specific organism, or in the action on the tissues of a chemical poison, the result of infective processes seems not entirely settled. The latter theory, based on such observations as those of Buchner that dead bacilli or their protoplasm will determine a chemotaxis capable of causing tissue changes, or those of Sidney Martin, who obtained staphylococci from the blood of a case of infective endocarditis which could be cultivated and produced a proteid substance which, injected into animals, caused pyrexia, diminished coagulability of the blood, and, with an overdose, death with fatty degeneration of the heart, has its adherents, and will have as long as it is recognized as a possible cause for the joint manifestations of acute rheumatism.

The occurrence of toxic lesions of the heart in nephritis has been cited in support of the toxic nature of the cardiac manifestations of rheumatism. The analogy is not close, however, as the cardiac lesions of nephritis are practically always, in the absence of intercurrent infection, of a degenerative nature, while the diffuse myocarditis of rheumatic origin is inflammatory in type, and is usually associated with endocarditis or pericarditis, and with which it sustains etiologic relations. Moreover, myocarditis is much more frequently associated with toxic conditions of the blood not rheumatic than an acute lesion of the covering of the heart or of the lining of its cavities, while the latter are much more frequently associated with rheumatism than are acute myocardial changes. If a chemical agent be the causative factor in the production of the cardiac manifestations of articular rheumatism, then it must be one which has a peculiar affinity for the fibrous tissues of the heart, and different from all the other toxic substances which affect this organ. In a certain proportion of cases there appears a degree of myocarditis which can not be explained by extension of inflammation or by embolic or other direct infective processes, and we must assume with Hanot that toxins are capable of producing acute inflammations of the heart.

THE BACTERIAL RESEARCHES.

The bacterial evidence of direct infection of the heart tissues in rheumatism does not, at present, warrant an assumption other than that the infection is of a polymorphous nature, no specific organism having yet been found with sufficient constancy to cause it to be accepted as the special causative agent for rheumatic carditis. Certain organisms have been by some considered specific for rheumatic lesions of the heart, but at present may be regarded as occupying a position in the bacteriology of these lesions similar to that occupied by the *Bacillus endocarditis capsulatus* of Weichselbaum, or the *Bacillus immobilus et fetidus* of Fränkel and Sanger in relation to the bacteriology of endocarditis in general, and the organisms observed by Klebs, Köster and others in this connection.

Wilson, in 1885, found organisms in the pericardial fluid of a fatal case of endocarditis occurring with rheumatism. Popow (1887) obtained cocci from a blood culture in a case of rheumatism which in rabbits caused "acute articular rheumatism with pericarditis and endocarditis." Achalme (1891) obtained a bacillus by anaërobic culture from the pericardium, blood of the heart, and by direct examination of the pericardial fluid and from sections from the exudate from the mitral valves and sections from the pericardium. Inoculations gave no result. He again (1897) obtained this bacillus from the blood of the heart, the heart valves and the subpericardial tissue. He subsequently found the same bacillus in the blood of a living rheumatic. Triboulet and Coyon (1898) concluded that a diplococcus which they constantly found was the cause of the endocarditis of rheumatism. Intravenous injection of pure cultures caused mitral valvulitis with the diplococcus present in the diseased valves. Westphal and Wassermann (1899) found a recent endocarditis at autopsy of a case of acute rheumatism. Cultures from the blood, brain and mitral valve produced a streptococcus which caused arthritis in animals from whose joints the same micro-organism was obtained. Poynton and Paine (1900) demonstrated what they considered a typical diplococcus of rheumatic fever and endocarditis, which in animals produced polyarthritis, valvulitis, pericarditis and myocardial degeneration.

THREE VARIETIES OF MANIFESTATIONS.

The cardiac manifestations of rheumatism are pericardial, endocardial and myocardial. The importance of their manifestations is attested by the large proportion of cases of rheumatism in which they occur. In this connection they are essentially lesions of early life, and while the well-known laws of Bouillaud in relation to their association with rheumatism are abstractly true, namely, that in acute articular rheumatism of a violent type and general distribution, the coincidence of pericarditis and endocarditis is the rule, and the non-coincidence the exception; that in acute articular rheumatism of a mild type and partial distribution, the non-coincidence is the rule, and the coincidence the exception, yet clinically there is ample evidence of the somewhat frequent association of each of these conditions with the mildest types of rheumatism, and abundant postmortem evidence of their frequent and often unsuspected occurrence, especially of pericarditis, in rheumatism of early life, the statement of Sibson that the means of diagnosing pericarditis are practically infallible, to the contrary notwithstanding. Anders states that both plastic and sero-fibrinous pericarditis may occur in connection with rheumatic dyscrasia without evidence of arthritis.

PERICARDITIS.

According to Baumgarten, pericarditis occurs in about one-third of the cases of acute rheumatism. Anders states that plastic pericarditis occurs in more than one-half the cases of acute articular rheumatism, and Roberts states that the cases of rheumatic pericarditis are more numerous than all the other cases combined; that it is an essential part of the disease and not a mere complication. Sibson states that rheumatic pericarditis is three times less frequent than rheumatic endocarditis and that the latter is generally present also in children. He believes that the production and severity of the pericarditis is related to the increased activity of the heart in rheumatic conditions. Periendocarditis, or carditis, he considers as exclusively rheumatic. Sears reported 100 cases of sero-fibrinous pericarditis, 51 of which were due to acute rheumatism. In 100 fatal cases of heart disease reported by Sturges, pericarditis was present in all but 6. In 150 cases of

rheumatic heart disease reported by Lees, the pericardium was uninvolved in only 9 instances. Twenty per cent. of Sibson's 326 cases of acute rheumatism were complicated by pericarditis. Latham gave 7.5 per cent. and Chambers and Ormerod gave 13 per cent. and 71.7 per cent. respectively.

ENDOCARDITIS.

Acute rheumatism is generally conceded to be the most frequent cause of endocarditis, the observations of Bouillaud as to the frequency of this association being generally admitted. According to Dreshfield endocarditis is not a complication or sequel, but is an integral part of the rheumatic affection, a localization of the rheumatic poison in the tissues of the valves, the mean percentage obtained from various sources being from 20 to 23 per cent.

Of Sibson's 325 cases 107 had endocarditis alone, and 54 endopericarditis. The latter is particularly frequent in children, and Sturges says that "the rheumatic heart inflammation of children when pericardial is always endocardial as well, and when endocardial is extremely likely, with the recurrence of rheumatism, to involve the pericardium also." The incidence of endocarditis in acute rheumatism is stated by Bamberger as 20 per cent. of the cases; by Wunderlich, 9 per cent.; by the Bellevue Hospital report, 33 per cent.; by Anders, 40 per cent.; by West, 61.3 per cent. In children it is variously estimated at from 50 to 80 per cent. The endocarditis most often occurs during the primary attack of rheumatism. In 115 fatal cases given by Poynton it so occurred in nearly one-third of the cases. Bouillaud and Trousseau called attention to the fact that the endocarditis may precede the articular manifestations.

MYOCARDITIS.

The occurrence of acute myocarditis in connection with rheumatism is generally admitted. Lees believes that acute dilatation of the heart occurs from myocarditis in rheumatism, but is less severe than in diphtheria and influenza, probably because of less deleterious effects of toxins on the myocardium. Douglass Powell states that acute myocarditis may be secondary to rheumatism. Leyden regards the myocardial lesion of acute rheumatism as an acute myocarditis.

The general tendency at present to attribute marked dilatation of the left ventricle occurring during the course of an acute rheumatic mitral valvulitis to concurrent myocardial changes rather than to the mechanical effect of the valvular lesion, shows the general recognition of acute rheumatic myocarditis. The occurrence of acute myocarditis by the extension of pericardial or endocardial inflammation occurring with acute rheumatism is recognized by all authorities.

The nature of the pathologic changes, and the possibility of their occurring from other causes than extension, or by embolic processes—that is, from toxic causes—involves discussion foreign to this paper, but my own observation, clinically as well as postmortem, has been that in a certain proportion of cases the extent of the myocardial changes, the degree of the resulting dilatation and the rapidity of its development were not at all in proportion to the extent and severity of the pericardial or endocardial involvement. Anders states that it is probable that myocarditis may occur from rheumatism without involving endocardium or pericardium. Poynton describes a case of rheumatism associated with apparently a primary myocarditis. He calls attention to the fact that severe cardiac involvement may be present without signs of valvulitis. His studies of the pathology of the myocardium in fatal cases of rheumatism shows cellular exudation in scattered foci which are not necessarily dependent on pericarditis. Giacomelli, from experiments on animals with various bacteria and subsequent examinations of the myocardium, concludes that there is constantly more or less marked changes in the heart muscle fibers varying from simple atrophy to fatty degeneration and destruction. Rarely the interstitial connective tissue and vessels are involved by diffuse, lymphoid infiltration. There are no definite lesions corresponding to definite, specific poisons. The changes are due to the direct action of bacterial toxins and poisons on the muscle fiber itself.

The frequent occurrence of toxic degenerations of the heart muscle in dyscrasiæ other than rheumatic exhibit the effect on the heart muscle of toxic agents, and it is possible that in rheumatism the heart muscle may be affected by toxic agents which do not directly affect the less vascular tissues of the epicardium or valves. The most extensive degrees, however, of rheumatic myocarditis are connected with those cases of pericarditis and endocarditis of bacterial association, and continuity of tissue would appear to be the chief element in its production. I believe that some degree of myocarditis is a more frequent element in the cardiac manifestations of acute rheumatism than is generally supposed, and that especially in childhood it is a powerful factor in the severe and rapidly fatal cases of cardiac rheumatism.

This imperfect consideration of this part of the subject is yet sufficient to emphasize the importance of the prevention of cardiac complications in articular rheumatism. These preventative measures pertain not only to the incidence of the more acute phases of the cardiac manifestations, but also to their control when established as preventative of the remote effects.

If we regard the cardiac manifestations as a local manifestation, a feature of the symptom complex, an integral part of the rheumatic disease, the importance of early and effectual control of the rheumatic infection is evident. Sansom says that if the microbic theory be true then the toxins are so slowly evolved as to continue to produce marked changes for months or years, or else the toxins first induce a morbid perversion of metabolism whereby an autogenetic morbid product is formed for an indefinite period. While this appears somewhat too theoretical, it serves to impress the importance of rest during and immediately after the acute period of rheumatism as related to the occurrence of cardiac involvement.

PROPHYLAXIS.

With the treatment of acute rheumatism it is not my province to deal further than to emphasize my belief in the importance, as far as avoiding heart complications is concerned, of early control of the condition as shown by mitigation of the joint symptoms and subsidence of fever, and to express my conviction that this is best obtained by the temporary employment of pure salicylic acid in sufficient dosage to produce relief of pain and fever, with sweating and more or less depression, to be followed by sodium salicylate combined with alkaline diuretics.

The prophylaxis of the cardiac complications of articular rheumatism is constantly engaging more direct effort. There are those who believe that we have no control over the frequency of the incidence of these conditions in rheumatism, and statistics are as notoriously inconclusive on this point as on many others, while the outcome of a give series of cases may furnish the basis for

an entirely different conclusion to the physician who treats the patients than it will to a less directly interested party. Caton's series of 500 cases with a cardiac complication rate of less than 20 per cent. appeals more forcibly to him in support of his method of treatment than to most of us, even though we can not duplicate his statistics.

There is a vital feature to which I am afraid too little attention has in the past been given, especially in the milder forms of rheumatism in children, and that is careful observation of the heart during and for some time after these rheumatic manifestations. We are too much given to considering alterations in cardiac rate and rhythm during the course of rheumatism as depending on the general conditions unless there are murmurs or friction sounds about the heart. We should bear in mind that these signs are neither a necessary nor invariable accompaniment of cardiac rheumatism, that cardiac irritability marked by excited action and rhythmic changes, especially remission and intermission, is an early indication of cardiac involvement, and that when physical signs are evident it is not unlikely that the localization is already beyond our control. Cardiac irritability, therefore, should indicate the institution of measures of prevention, and these should be carried out as thoroughly and persistently as if more positive objective signs were present.

VALUE OF REST AND SLEEP.

It is doubtful if the value of rest is generally appreciated, at least as a therapeutic measure it is often neglected. In children it is particularly important. Sir William Jenner is said to have stated that "children do not grow out of heart disease; they grow into it." Hilton emphasized the fact that rest diminished the action of the heart and afforded opportunity for better nutrition. The views of Sibson in regard to increased heart action and the occurrence of pericarditis has already been stated. Powell has pointed out the importance of rest in children for several weeks after the joint symptoms have subsided, as salicylates may control the joint manifestations and yet the heart is not more able to bear exercise than when the joints were painful and inflamed. He thinks that primary rheumatic endocarditis is frequently curable if the patient continues at rest long enough for the valves to recover before strain is thrown on them. The value of rest is insisted on by Potain, Caton, Thompson and Holt. The latter thinks that in inflammatory conditions of the heart in children rest should be measured by months rather than weeks. The difficulty of keeping the patient at rest is admitted, but the necessity of maintaining the recumbent position until changed to a sitting or upright position is not attended by undue acceleration of pulse rate or change in rhythm can not be too strongly insisted on.

The necessity of sleep is admitted by all, especially in regard to young patients, and yet we too frequently allow the restorative value of sleep to wait on the exhaustion of Nature, when a little timely aid would obviate the nervous strain necessarily attending such a process. Of the hypnotic remedies recommended in this connection the bromids are often unsatisfactory, unless it be the bromid of sodium in connection with small doses of codein. Chloral is, as a rule, too depressing for these cases. Paraldehyd may be efficient, but is so disagreeable as to be practically impossible. Trional is unobjectional and often effective. Chloralamid has proven the most satisfactory hypnotic for these cases that I have employed, and it appears to be relatively safe.

DIET AND MEDICATION.

Light, ventilation and diet are important. Diet should consist of concentrated and easily assimilated food. Milk is generally recommended and can not be improved on if the patient takes it well. Potain recommends superalimentation. We must be cautious about crowding food for fear of imperfect digestion increasing cardiac effort and distress.

Of the drugs employed in this connection the salicylates and iodids still hold first place. E. Barie recommends the prophylactic use of iodids, with salicylates for analgesic and antithermic purposes. Potain recommends sodium iodid. Relative to those who doubt the beneficial effect of the salicylates, or profess to believe in their increasing the liability of cardiac involvement, it would appear that as we have definite beneficial effects from their administration in rheumatic conditions generally, and an indefinite understanding of the specific etiologic factor of rheumatic cardiac manifestations individually, it is our duty to give them. Weill, in emphasizing the employment of salicylates to prevent endopericarditis in infantile life, remarks that as to the salicylates predisposing to cardiac involvement, the latter occurs frequently in children who have slight rheumatism and who have not taken salicylates. Packard says that cardiac complications are, to say the least, not increased in frequency by salicylates, and that such apparent effect is probably due to the reduction of pain and fever, allowing the patients to move about before the heart has had time to recover itself.

The alkalies are not yet entirely distanced by the salicylates. Ewart believes that the alkaline treatment reduces the frequency of endocarditis, in connection with diet, through lowering the coagulability of the blood—a property shared by iodid of potash, which, therefore, is to be recommended in threatened endocarditis. William Keen thinks there is less risk of heart complications if the urine is kept alkaline. Personally, I prefer the concurrent use of sodium salicylates, sodium iodid and potassium citrate.

EXTERNAL THERAPY.

The value of external applications to the precordial area for the prevention and mitigation of cardiac rheumatism has been much discussed. According to Gibson, the only two measures which have any influence in preventing pericarditis in rheumatism are the systematic employment of cold by an ice bag, or by iced cloths, or by Leiter's tubes, and the continuous application of blisters after the method of Caton of Liverpool. The latter claims his method of treatment will prevent valvulitis or will check it if instituted sufficiently early. He reports 54 cases in which the heart was involved on admission, and of which 34 were discharged with normal hearts. In another series of 31 cases which developed primary valvulitis while under observation, 28 made a good, and in all but 2, to the best of his knowledge, a permanent recovery. The features of this method of treatment are: 1. Absolute rest in bed in order to protect the valves from pressure. The patient is wrapped in flannel from head to foot. A patient with a true valvular bruit is kept motionless in the recumbent position for a long time to slow the heart and prevent blood waves of high tension from injuring swollen or softened valve cusps. 2. Blisters the size of a florin applied singly and successively over the anterior terminations of the first, second, third or fourth dorsal nerve, above but not over the pericardium. The blisters are followed by small poultices. They are intended to stimulate the

trophic nerves of the heart through the sensory filaments of its related skin area and so hasten absorption and repair. 3. Sodium or potassium iodid in from 8 to 10 grain doses thrice daily, and in some cases small doses of mercury, to help absorption of the, at first, imperfectly organized inflammatory products in the cusps and endocardium.

Sansom recommends the bold and prolonged use of the ice bag over the precordial area. Its continuous use is advocated by Robardet, who protects the skin by a layer of flannel. Thompson recommends leeches, sedative applications and the continued administration of aconite.

The most effectual local measure is the continued application of cold to the precordium. Hot applications have an analgesic effect, and are more readily allowed by children, but their effect on the inflammatory condition of the heart is decidedly less than that of cold. Aconite has a distinctly beneficial effect in quieting the heart and slowing its action, Gibson's assertion that it is entirely useless to the contrary notwithstanding. In the excitable conditions of the earlier stages aconite may be combined advantageously with sodium bromid. In certain rheumatic infections of a mixed type the serum treatment may be advisable, but its relation to the conditions under consideration is not sufficiently definite to warrant its present consideration.

STATIC ELECTRICITY IN TREATMENT OF MORPHINISM.*

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Electricity, while not old in medicine, can not be considered new. One of the first advocates of static electricity as a medical agent, I believe, was John Wesley. While endeavoring to educate the people to his ideas of a religious life he spent some time writing and teaching how to apply static electricity for the relief of pain and the cure of certain diseased conditions. He must have given the subject considerable thought and study for much of his advice is as good as that of any of the writings we have at the present time. While there is no doubt in my mind that static electricity may be used to advantage in nearly all forms of neurotic troubles, I shall confine myself in this short paper to its use in the treatment of morphinism.

There is no royal road to the cure of drug addictions. There are no specifics, so that every agent that can be found that is of service in some or all of the cases treated is of value and should be utilized as the conditions of the patients require. In nearly every newspaper and magazine, and I am sorry to say that too often in medical journals we find advertised a sure cure for morphin and other drug addictions where the patient will find freedom from further necessity of the use of the drug in from one to ten days. I have investigated some of them during the past ten years and found them all to be cures that do not cure. Nevertheless, most cases of morphinism can be permanently cured. But as in the treatment of other neurotic diseases, we must have time, the coöperation of the patient, employ any and all agents that have been proven to be useful, and then with the tact and skill that comes with reading and experience every patient can be freed from the addiction, and a large majority can be kept more comfortable during their entire treatment than while taking the drug themselves. I have no faith in either the sudden or rapid withdrawal methods. I have known of many patients treated after each of the above methods and I have yet to find the first case that did not relapse within a very short time after treatment. While I do not doubt that some have been cured permanently by each of the methods, it would appear to me that the percentage must be smaller than by the gradual reduction method, or I would have been able to have found at least one person in all these years who had not relapsed.

Static electricity is in no sense a specific or cure for the morphin addiction, although there are many uncomfortable symptoms that arise during the treatment of some cases that can be relieved with the static machine, for which I was formerly obliged to give an increased amount of morphin. A frequent symptom complained of, when the dose of morphin is a little small, is nausea or vomiting or pain at the epigastrium. Nearly always this can be relieved and the patient kept comfortable until the next regular hour for giving morphin, unless there has been too large a reduction made in the dose given. For the relief of the symptom place the patient on the platform which is connected with one of the prime conductors (I do not care which), then with a brush or single point metal electrode connected with the other prime conductor throw a sharp breeze or spray, or if that does not relieve the pain or nausea some small sparks directly over the epigastric region. The treatment should be continued for about ten minutes or until the symptom is relieved, and should the symptoms return repeat the treatment as often as necessary to keep the patient comfortable, which can many times be done and thereby save giving an extra dose of morphin unless, as I have already said, there had been too large a reduction made in the previous dose. Another frequent symptom is a peculiar nervous sensation of the legs described by patients as pulling of the muscles which, if not relieved, will amount to a severe pain and cramps. I have often been able to relieve this symptom with the use of the breeze or spray and prevent giving morphin. Burning of the feet and legs can often be relieved. Headache is of frequent occurrence and can nearly always be relieved with a breeze from the crown of ten or fifteen minutes. When relieved it is liable to return in half an hour or an hour, but a second or perhaps a third application will usually relieve it for that day. Neuralgic pains or what appears to be neuralgic are very common in patients during the withdrawal period, and I have found the static current very efficient in controlling this very unpleasant symptom. No remedy that I have tried have I had so good success with for the purpose of equalizing the circulation as I have with the static current. Many and many a time patients come to me with hands and feet cold and clammy, features pinched and looking sick when with ten or fifteen minutes of a breeze from the head crown and the other electrode applied to the feet all the symptoms would be changed, the entire skin would be warmed and the patient made comfortable. Sleeplessness can in some cases be overcome by a ten minutes' use of electricity just previous to the patient's retiring for the night.

No remedy with which I am acquainted will so readily and universally correct the heart's action as will static electricity under certain conditions. Should a large part of the patient's ordinary dose be taken away at one time electricity would be entirely inadequate to control the heart. But we will presume that the heart is being properly supported with strychnin or some

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Drs. Frederick Peterson, Richard Dewey and H. A. Tomlinson.

other heart tonic and we have made a small reduction in the dose, enough so that the patient is a little weak and nervous. Under these conditions the slightest cause, either mental or physical, is sufficient to increase the circulation 30 to 60 beats to the minute and make the patient very uncomfortable. Under these conditions electricity is a sovereign remedy. Should the heart become slow and weak the same remedy appears to act about as well. In fact, there are but few of the nervous phenomena due to the withdrawing of morphin but may be modified with the static machine.

Valuable as electricity is in relieving the above symptoms, I consider its greatest worth is as a general nerve tonic. There are many cases that would not probably require any electric treatment during the entire withdrawal period, while many others will be in much better condition at the end of their treatment if they take electricity twice a day during the whole period of withdrawal. I make it a rule to give ten to twenty minutes of a general electrization to all patients who come to me as nervous wrecks, such as a majority of morphin patients are, and I feel sure from experience that they recuperate faster and are more comfortable, and I believe that it is of great importance that patients be kept just as comfortable as possible while withdrawing the morphin. Certain it is that one is far from being in a favorable condition for recuperation when he can not sleep or rest at night, nor eat or be at ease during the day. Most patients can be kept comfortable during treatment and made to improve in flesh and general health, a condition much to be desired by the physician and very much appreciated by the patient.

While static electricity can be considered only as one of the remedies to be used in the treatment of this troublesome disease, it has been a valuable one in my hands. I am thoroughly convinced, after years of experience in the treatment of narcotic drug addictions, that those patients who receive the least shock from withdrawal of the drug, or, in other words, those who are kept the most comfortable during the period of withdrawal, are the ones whom we are able to more nearly restore their nervous systems to a normal condition, and as we come nearer to doing this we increase the probabilities of a permanent cure.

A large per cent. of patients will leave the institution as soon as the drug is withdrawn, and they find it possible to get along without the use of it. Unless there has been considerable repair of the nervous system previous to the time of leaving the institution there will be a very large per cent. of relapses. All patients should remain in the institution until they are quite well and strong.

The one unpleasant feature of static electricity is that all the machines that I have any knowledge of are inclined to take a vacation during two or three of the hot months. However, with proper care they can be made to give some current that will be more or less efficient.

To recapitulate. Reduce the morphin so gradually that there is no shock or irritation to the nervous system. Static electricity will be of service in helping to keep the patient in such a condition that the above is possible. The nearer one can keep the patient in a condition of comfort and ease the better and more rapidly will the nervous system recuperate. Static electricity will help us keep the patient in that condition.

Keep the patients in the institution under tonic treatment until they are as near perfect health as possible.

Static electricity is a good nerve tonic.

900 Fairmont Street.

DISCUSSION.

DR. RICHARD DEWEY, Wauwatosa, Wis.—I would like to ask Dr. Pressey if he used the machine with the mica plates. It is claimed that this machine holds its power better than the others.

DR. A. T. GUNDRY, Baltimore—I would like to ask the Doctor about what percentage of permanent cures he records.

DR. PRESSEY—I have never used a mica plate machine. Manufacturers of the machines with mica plates claim that their machines work better in hot, damp weather than machines with glass plates, and I would not be surprised if it were true. I think there is scarcely any agent that will condense moisture more rapidly than glass at the same temperature. Of course, it is the moisture that collects on the plates that prevents generating a current.

As to the percentage of cases permanently cured, that is one of the most difficult things to answer. I find it almost impossible to keep track of patients so as to know whether they have relapsed or not. A very large proportion of the sporting class (both men and women) will relapse. However, some of them will remain cured.

A large part of the patients that I have treated have been well educated, intelligent people who have become addicted through some misfortune, and not from a desire to dissipate. This class want to be cured and to remain cured, and a large per cent. of them do remain cured. Just what that per cent. is I do not know. I have treated some cases the second and third time, and some of these cases have now been cured three and four years and are all right. It is my opinion that with proper care and treatment 60 to 80 per cent. of the better classes may be permanently cured.

PERIPHERAL NEURITIS AS A COMPLICATION OF WHOOPING-COUGH.*

AUGUSTUS A. ESHNER, M.D.

Professor of Clinical Medicine in the Philadelphia Polyclinic; Physician to the Philadelphia Hospital; Assistant Physician to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases; Physician to the Hospital for Diseases of the Lungs at Chestnut Hill.

PHILADELPHIA.

Our knowledge of neuritis is of but comparatively recent date. In fact, one of the earliest systematic studies of the subject was made by three American physicians, namely, Mitchell, Morehouse and Keen, whose observations on traumatic neuritis during and following the Civil War have become classical. Isolated cases of neuritis due to other causes had been reported previously, but their nature was not clearly understood and many of them were considered examples of anterior poliomyelitis or spinal muscular atrophy. It was not, however, until 1880 that, largely as a result of the labors of Leyden and others, the clinical and anatomic picture of polyneuritis was established. The etiologic diversity was at the same time recognized and the clinical variability later pointed out. Still more recently the conception of the neuron, comprising the ganglion-cell and its peripheral processes as one continuous whole, has helped to explain on the one hand certain relationships between anterior poliomyelitis and motor neuritis, and on the other hand the similarity between the symptoms of sensory neuritis and degenerative disease of the posterior columns of the spinal cord.

CLASSIFICATION OF CAUSES.

Neuritis may result from a great variety of causes, some of extrinsic, others of intrinsic origin, some local, others generalized in operation, and the character and distribution of the disease will vary accordingly. Num-

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erous classifications of neuritis from the etiologic standpoint have been attempted, but owing to imperfections in existing knowledge none yet proposed is entirely satisfactory. Thus Remak,[1] in his article on "Neuritis and Polyneuritis," makes the following classification:

A. Neuritis of local origin.
  1. Traumatic.
    a. From external injury.
    b. From subcutaneous injections.
    c. Without external injury.
    d. Traumatic ascending neuritis.
  2. Neuritis by extension.
  3. Professional neuritis.

B. Neuritis and polyneuritis from internal causes.
  1. Spontaneous (infectious and rheumatic) amyotrophic polyneuritis.
  2. The neuritic form of ascending paralysis.
  3. Peripheral neurotabes and acute polyneuritic ataxia.
  4. Neuritis and polyneuritis attending and following infectious diseases.
  5. Dyscrasic neuritis and polyneuritis.
  6. Toxic neuritis and polyneuritis.

The causes of neuritis are and of necessity must be the same as those of inflammation in general, and I would accordingly suggest the following classification as being most nearly in harmony with current conceptions of the mode of action of the factors concerned in excitation of the inflammatory process:

A. Physical—comprising the effects of extremes of temperature, mechanical influences, and the like.

B. Chemical.
  1. Acting from within (metabolic), such as gout, diabetes, uremia and the like.
  2. Acting from without, such as lead, mercury, arsenic, copper, alcohol and the like.

C. Biologic—comprising infectious diseases.

This classification comprehends all of the causes of neuritis, as well as of inflammation in general. The chemical causes, however, may in their ultimate action be considered as a variety of the physical. Further, the biologic causes must be viewed as essentially chemical, being effective largely, if not wholly, through the activity of the toxic products resulting from the reaction that takes place between the causative micro-organisms and the invaded tissues, although the irritation resulting from the presence of the micro-organisms in the capacity of foreign bodies can not be entirely ignored. Finally, the separation of the metabolic from the biologic is somewhat arbitrary, as from a liberal standpoint the latter also are metabolic, the causative agency in each instance being of cellular origin. The classification proposed may therefore be simplified by including all of the etiologic factors in one great group, namely, the physical, which is subdivisible into: 1, causes that are chemical, and, 2, those that are not. The former comprise: *a*, poisons introduced from without, and, *b*, poisons generated within the body. The first of these may be of infinite variety, while the second are subdivisible into, 1, those of metabolic, and, 2, those of infective origin.

THE SYMPTOMS.

Among the more distinctive symptoms of neuritis are pain, tenderness and swelling in the course of the affected nerves, with muscular weakness and wasting and degenerative electric reactions and alterations in the reflexes. Sensibility may be heightened, particularly at first, but generally it is impaired in greater or lesser degree. Associated with derangement of sensibility there may be ataxia or other disorder of coördination. The condition of the reflexes, superficial and deep, depends upon the state of the factors that enter into the formation of the reflex arc, although reinforcement may be brought about as a result of either local or general influences. Secretory, circulatory and trophic changes of varied kind in the distribution of the affected nerves are not rare and contractures and arthropathies may occur as sequels.

CASES ILLUSTRATING THE CONNECTION WITH WHOOPING-COUGH.

Neuritis appears to be a rare complication of whooping-cough, not even being referred to in this connection in most text-books and systematic treatises, and only a small number of cases of the kind being recorded in the literature. The inflammation may involve one nerve or many nerves, and those of special as well as those of common sensibility. Of cases of the latter variety I have succeeded in collecting those that follow:

Surmay[2] reports the case of a girl, 5 years old, who suffered from an attack of typhoid fever followed by weakness in the lower extremities. Great improvement ensued and the gait became almost normal. After an attack of whooping-cough six months later, however, the previous condition of weakness returned in greater degree, with foot-drop, almost complete paralysis of the extensors and abductors of the feet and of the muscles of the toes, and from which recovery failed to take place.

In this case there appears to have been a polyneuritis complicating the attack of typhoid fever and recurring in accentuated form in the sequence of an attack of whooping-cough at a later date.

A. Jurasz[3] reports the case of a boy, 2 years old, in whom symptoms indicative of paralysis of the posterior crico-arytenoid muscles developed during the course of an attack of whooping-cough. Inspiratory dyspnea was present, with loud, long, snoring sounds and epigastric and suprasternal retraction.

It can not with certainty be determined from the context whether this case is really one of neuritis, but by reason of the isolated character of the paralysis it was thought justifiable to include the report among this collection. The motor disability may be looked upon as due to degeneration of the posterior crico-arytenoid muscles or their intramuscular nervous elements or of the recurrent laryngeal nerve.

P. J. Moebius[4] reports the case of a boy, 3 years old, in whom six weeks after the onset of an attack of whooping-cough weakness was observed in the lower extremities, with absence of the knee-jerks, but with preservation of sensibility. Subsequently paralysis appeared in the upper extremities, although improvement took place in the lower. The muscles of the neck and the diaphragm also were involved. The reflexes in the arms and legs were lost, and the abdominal reflexes were enfeebled, while the cremasteric reflex was preserved. The functions of the rectum and bladder were not affected. Improvement took place and was rapid and progressive, although the knee-jerks were rather slow to return. Moebius describes the case as one of ascending paralysis, and he considers the involvement of the bladder and the rectum, as well as the speedy recovery, indicative of neuritis rather than myelitis.

E. Mackey[5] reports the case of a boy, 6 years old, who on recovery from a protracted attack of whooping-cough following measles, complained of pain and weakness in the arms and legs, of tenderness in the course of the sciatic nerve, of foot-drop, inability to stand and to move the toes, of loss of the knee-jerk and of the

plantar reflex and preservation of sensibility and of the cremasteric reflex. The affected muscles were flabby, but not distinctly wasted, and they at first yielded enfeebled and later degenerative electric reactions. The pupils reacted to light, the action of the sphincters remained unimpaired and swallowing was not interfered with. The patient grew worse for a time, but subsequently he improved slowly, although the knee-jerk had not returned when the report was made.

F. A. Craig[10] reports the case of a girl, 3 1-3 years old, in whom in the fourth week of an attack of whooping-cough paralysis of the left side of the face with internal strabismus of the left eye appeared. This failed to improve after recovery from the primary disease, and was thought to be due to venous hemorrhage into the medulla resulting from the increased pressure to which the veins were subjected in consequence of the violent spasmodic cough. It seems not impossible, however, that the symptoms might be due to inflammation of the sixth and seventh cerebral nerves.

Chas. Leroux,[6] in the course of a paper on the forms of paralysis attending whooping-cough, cites a case reported by Andre Moussous before the Bordeaux Society of Medicine on May 12, 1891. The patient was a child, 18 months old, who, during an attack of whooping-cough, had three convulsive seizures attended with fever and followed on the next day by paresis of the lower extremities, extending to the muscles of the trunk and the neck, without wasting or reaction of degeneration. The voice acquired a nasal character and liquids ingested were regurgitated through the nares. The reflexes could not be determined on account of the movements of the child. Sensibility was unimpaired and the functions of the bowels and the bladder were preserved. For a time there was alarming difficulty in breathing, but subsequently improvement set in and progressed to recovery.

Although this case is reported as one of peripheral origin, the development of the motor disability following convulsions, the mode of extension and the absence of wasting, of degenerative electric reaction and of sensory impairment at least raise reasonable doubt as to the seat of the disease and its character.

M. L. Guinon[7] reports the case of a girl, 5 years old, who, during the subsidence of an attack of whooping-cough, complained of pain in the lower extremities, with paresis, loss of knee-jerks, enfeebled plantar reflexes, weakness of the muscles of the trunk, neck and upper extremities, fibrillary tremor of th tongue, incontinence of urine, bilateral internal strabismus. Some of the affected muscles exhibited partial degenerative electrical reaction, others simple reduction in electrical irritability without qualitative change. Deglutition was not deranged. Improvement gradually took place, but scarlet fever and diphtheria occurred as intercurrent affections.

The foregoing represent all of the cases of peripheral neuritis complicating whooping-cough that I have been able to collect in a cursory search through the literature. I have intentionally omitted from consideration instances of optic neuritis and also cases complicated by deafness and probably due to disease of the auditory nerve, and of each of which a few examples have been reported. Other portions of the nervous system also, brain, medulla, spinal cord, may suffer—inflammation, hemorrhage, thrombotic or embolic softening—in connection with diphtheria, but it would appear from the evidence that the complications involving any portion of this system are uncommon, although it is true that convulsions are not altogther rare at some stage of the disease. To the rarity of paralysis as a complication of whooping-cough Valentin[8] has recently called attention. He was able to collect 83 cases due to all causes, and of these 62 were of cerebral origin, while but four were pontine, bulbar or spinal. P. Horveno[9] had previously stated that but few cases of paralysis of peripheral origin in the sequence of whooping-cough had been reported.

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DISCUSSION.

DR. E. G. CARPENTER, Columbus, Ohio—I would like to express my gratification at the new classification suggested. There seems to be so much confusion with regard to classifying the different phases in which neuritis expresses itself. This classification shows that the causes of neuritis have a common derivation, and the internal and the external causes, which are largely toxic, lay claim to the majority of the cases of neuritis. The pathology and histology of the disease bears this out, for the findings show especially changes in the anterior cornua cells, such as simple swelling and those indicating atrophy. Changes also occur in the nerve fibers in which they may be seen as segmented. There are changes in the nuclei, not only of the cells, but also of the neurons, and in the membranes of the vascular system. These changes show that the toxic influences have impaired or destroyed the nutrition of the neuron paths. Speaking again of the classification, frequently different titles have been given to these conditions, such as diphtheritic, alcoholic or puerperal neuritis. You might as well speak of typhoid neuritis, or the name suggested by any other infectious disease. I do not know how to explain these cases of neuritis caused by certain vocations, and would like to have a little light on that subject from the reader of the paper if anything has been given to us to show what changes have taken place in neuritis from a vocation.

DR. ESHNER—I am not quite sure that I gather just what Dr. Carpenter means when he refers to the cases of professional origin. If by that term he intends to include the cases of occupation neurosis, I am somewhat at a loss to answer. The occupation neuroses I am inclined to consider a form of local neurasthenia, if we may be permitted to use such a term. As has been stated on several occasions in this meeting, I think we must look on the whole group of so-called neuroses as expressive of nutritive disturbances. This is a view that I have long maintained, and I consider that factor as the underlying cause in the whole group of cases designated functional and which are attended with more or less definite symptomatology, but in which we have as yet been able to discover no lesions, microscopically or macroscopically. With regard to the disturbance in cases of occupation neurosis, I am scarcely willing to consider it in the nature of neuritis. I believe that certain changes take place, probably in the cells of the cerebral cortex, perhaps in the peripheral nerves. The cases in which neuritis occurs as a result of intoxication, as from lead or mercury or arsenic, or the like, in the course of various occupations are readily susceptible.

Receding Gums.—The application of glycerite of tannin to spongy and receding gums will be found effective. Whether this condition be due to ptyalism or debility following acute disease, the topical use of this simple remedy will be satisfactory.—*Med. Standard.*

A NOTE ON THE CHEMICAL DIAGNOSIS OF HYPERNEPHROMAS (SUPRARENAL TUMORS) OF THE KIDNEY.*

ALFRED C. CROFTAN, M.D.
CHICAGO.

In two recent publications[1] I have shown that a watery extract of fresh suprarenal glands possesses the following properties:

1. Injected into the body of a dog or a rabbit it produces glycosuria (see also Blum's, Zuelzer's and Herter's recent publications).

2. It possesses the power of converting starch into dextrose and maltose and this power of the extract is lost on boiling.

3. It causes the blue color produced by iodin in a starch solution to disappear.

I am indebted to Dr. A. O. J. Kelly of Philadelphia, whose work on hypernephromas is well known, for the suggestion that possibly hypernephromas possessed properties similar to those shown to be possessed by the suprarenals themselves. It seemed possible that an investigation of this question might lead to an additional and important means of differentiating hypernephromas from tumors derived from proper renal structures.

Inasmuch as it was thought that conclusive evidence might not be furnished by old preparations of hypernephromas, the matter remained in abeyance until an opportunity to investigate the subject was afforded by the obtaining of a fresh hypernephroma at a necropsy performed by Dr. A. O. J. Kelly at the German Hospital, April 20, 1902 (Necropsy No. 460). The results attained with this specimen suggested the wisdom of extending the scope of the investigation so as to include (a) that portion of the kidney from this case that was not yet invaded by the tumor growth; (b) several old hypernephromas; (c) a squamous epithelioma developing from the mucous membrane of the pelvis and invading the kidney structures, and (d) fresh normal kidney tissue.

Dr. Kelly has kindly furnished the following description of the fresh tumor:

The fresh hypernephroma was obtained at necropsy from a male subject, aged 42 years. The tumor growth occupied the upper two-thirds of the right kidney which measured 15½x10x7 cm., and weighed 600 grams. The tumor was entirely subcapsular, well circumscribed and consisted of spheroid or ovoid nodules that varied somewhat in size, and that were whitish or yellowish-white in color and moderately firm. The growth was evidently fatty and was somewhat soft in certain regions, but marked retrograde metamorphosis was nowhere to be seen. The growth invaded the pelvis of the kidney but had not penetrated the mucous membrane. Microscopically the tumor consisted of a stroma made up of a rather close network of capillary blood vessels and of cells intimately associated with the capillaries and arranged in rows and larger masses within the meshes of the vascular network. In great part the capillaries were collapsed. The single layer of endothelium of which the capillaries were composed was generally intact. The arrangement of the cells within the capillary network recalled the zona fasciculata of the suprarenal, that is, the cells were arranged in rows and double rows, and in some places in larger masses. Except in the larger masses the cells were attached directly to the endothelium or the capillaries, and this was true also of the more external of the cells in the larger masses. The tumor cells varied somewhat in shape; for the most part they were polygonal, but some were distinctly columnar. The cell protoplasm was faintly granular and contained rather large droplets of fat (in preparations after treatment with alcohol and ether the fat droplets were represented by large vacuoles). Generally the cells were well preserved, being epithelial in appearance; they contained a single nucleus that stained well and revealed distinct nucleoli. Droplets of glycogen also were present in considerable numbers. In the center of some of the larger collection of cells more or less necrosis was present.

THE POWER TO PRODUCE GLYCOSURIA.

Twenty grams of the fresh hypernephroma were mashed into a fine pulp with sand and the mass extracted with 100 cc. of distilled water. Of this extract, after filtration through a gauze filter, 50 cc. were injected into the muscles of the lumbar region of a rabbit. The first urine was passed 10 hours after the injection. It reduced Fehling's solution, turned the plane of polarized light to the right, gave a positive fermentation test and formed a typical dextrosazon with phenylhydrazin. The urine contained 2.47 per cent. of dextrose. The second specimen was voided fourteen hours after the injection and contained 1.65 per cent. of dextrose. The third specimen was passed between the twenty-first and twenty-fifth hours after the injection, and contained only a trace of reducing substance, the nature of which could not be determined. The fourth specimen examined after twenty-nine hours contained no sugar and was altogether normal. The animal recovered. No bile pigment was at any time voided nor was the area of injection discolored as in some of the injections with suprarenal extract already reported.

THE DIASTATIC ACTION.

A watery extract of the fresh hypernephroma was prepared as mentioned above, and equal portions were distributed into several test tubes containing equal portions of dilute starch solution. Four of these test tubes were boiled, four were not boiled. To all of the test tubes 2 *pro mille* of sodium fluorid were added in order to prevent the action of bacteria. At the expiration of 24 hours the tubes were examined for sugar. It was found that the tubes that had not been boiled contained appreciable quantities of dextrose, but that those that had been boiled did not reduce Fehling's solution and did not respond to other tests for dextrose. The conditions found correspond in all respects to those described in regard to the action of suprarenal extract on starch solution. A series of tubes was also prepared in the same manner with glycogen instead of with starch, and it was found that here, too, hypernephroma extract formed sugar, but that no sugar was formed if the extract was first boiled.

THE POWER TO DECOLORIZE IODIN-STARCH SOLUTION.

Equal portions of starch solution having been distributed in several test tubes, hypernephroma extract was added to one-half of them, and then one drop of an alcoholic iodin solution was added to each. Those tubes that contained no hypernephroma extract immediately turned blue and remained blue; whereas those tubes that contained hypernephroma extract turned blue for an instant only and became immediately decolorized. In performing this test care must be exercised not to add too much iodin solution, as in the presence of a considerable quantity of the iodin the decolorization proceeds very slowly. If a great excess of the iodin is added no decolorization whatever may occur, as, of course, the power of the small amount of active substance in the hypernephroma is limited—the decolorization being, in my opinion, a purely chemical process, in contradistinc-

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* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Pathology and Physiology, and approved for publication by the Executive Committee: Drs. A. Stengel, W. S. Hall and L. Hektoen.

1. Concerning a Sugar-forming Ferment in Suprarenal Extract. A Preliminary Report on Suprarenal Glycosuria. American Medicine, Jan. 18, 1902, vol. iii, p. 113. Das diastatische Ferment der Nebennieren. Pflüger's Archiv für die gesammte Physiologie, 1902.

tion to the sugar-forming power that I consider to be of a fermentative character.

So much having been demonstrated, two old hypernephromas that had been removed at operation by Dr. John B Deaver[2]—one from a woman, aged 49 years, on April 16, 1899, and the other[3] from a man, aged 45 years, on Feb. 25, 1902, were furnished by Dr. Kelly and investigated by me. Since removal both of these tumors had been preserved in formalin. Both gave a typical iodin reaction, but extracts made from them did not produce glycosuria when injected into a rabbit, nor did they possess diastatic powers. Extracts made from that portion of the kidney not yet invaded by the fresh hypernephroma as well as extracts from other fresh kidney tissue and from the squamous epithelioma developed from the mucous membrane of the kidney pelvis were submitted to these tests with a negative response in each case. The squamous epithelioma of the kidney pelvis had been in formalin and alcohol since May, 1899.

THE VALUE OF THESE FACTS.

In view of these results I believe that it is possible by these simple chemical tests to differentiate hypernephromas from other tumors of the kidney. The last named reaction in particular is so easy and rapid of execution, and so characteristic, even pathognomonic, of suprarenal tissue that, should the occasion arise, it might be made use of as a convenient and time-saving means for diagnosticating hypernephromas immediately at the time of operation or at the necropsy table.

Not the least interesting results of these investigations has been the demonstration that the cells of hypernephromas are not only morphologically identical with suprarenal cells, but that they are also functionally identical with them; and it is especially interesting that this functional activity should be preserved in the large mass of cells making up the massive and malignant hypernephromas which, as is well known, result from proliferation of aberrant suprarenal rests that are often microscopic in size.

It is probable that by means of these tests we may also be enabled to determine the exact nature of certain bodies found in the broad ligament in the female and in the spermatic cord, etc., in the male, and known as Marchand's adrenals. During recent years these bodies have been the subject of much controversy, the question at issue being whether they are to be looked upon as aberrant suprarenal rests or as more or less independent bodies. I intend to apply these tests to these bodies as soon as material can be procured, and I believe that should the tests respond positively we shall be justified in declaring these bodies to be aberrant suprarenal rests, whereas should the tests respond negatively we shall be compelled to conclude that they are more or less independent bodies.

It will be interesting to pursue this line of thought and to endeavor to ascertain whether or not other groups of specific tumor cells found in localities remote from the location of the parent growth (metastases) also possess the functional properties of the organ from which they are derived.

DISCUSSION.

DR. H. R. GAYLORD, Buffalo—I am especially interested in this communication of Dr. Croftan, as for nearly two years we have been looking for a hypernephroma to determine if these tumors contain the adrenal principle. The chemical work was done by Dr. G. H. A. Clowes, chemist to our laboratory. The first tumor examined had been hardened in formalin, and the second proved to be an adenocarcinoma, and for these reasons both gave negative results. We have a number of hyperne phromata which we shall now submit to the test which has given Dr. Croftan such interesting results. This line of research is of the greatest importance, and we believe with him, that along these lines lies the solution of many difficult problems.

DR. LEO LOEB, Chicago—In certain cases tumors seem to produce the same substances which are normally produced by the cells from which they originated. In this regard Von Eiselsberg's observation, according to which a metastasis of a tumor of the thyroid prevented the results of removal of the thyroid itself, has especially become well known. It is, however, doubtful if tumor cells are always identical in their chemical activity with the normal cells from which they are derived. Certain investigations might be cited against this view. I also might mention that I observed lately in an animal an epithelial tumor of the mammary gland which neither during nor after pregnancy produced any milk.

DR. E. LIBMAN, New York—Four years ago I performed an autopsy on a young woman who died of diabetes, and found an enormous hypernephroma weighing about seven pounds. I was inclined to think there was some connection between this tumor and the diabetic condition. I am more impressed with such an idea since hearing Dr. Croftan's paper.

DR. CROFTAN—The question of this diastatic ferment in the blood is a very interesting one, but this is not the place to discuss the etiology of suprarenal ferments. My theory is that the suprarenal gland has one of two functions: it either secretes a diastatic ferment which, entering the blood in excessive quantities, converts the glycogen into sugar, causing a flooding of the blood with sugar, or it acts as a disintoxicating organ. As there are a great many cells of the sympathetic type in the suprarenals we can understand how in either case stimulation or inhibition might regulate the amount of diastatic ferment in the blood and in this way control the amount of dextrose poured into the blood.

Some of you may not know that to Dr. Porter more than to anyone else is due the credit of the fact that a laboratory can now be fitted out at a small expense, owing to the many improvements he has made in physiological apparatus and his endeavor to cheapen the cost of same.

2. See A. O. J. Kelly, On Certain Tumors of the Kidney—Hypernephroma, etc., Journal of Medical Research, 1902, Case No. 15.
3. Ibid., Case No. 16.

A STUDY OF SIR JAMES PAGET IN HIS WRITINGS.*

HELEN C. PUTNAM, A.B., M.D.
PROVIDENCE, R. I.

"Examine men's ruling principles, even those of the wise, what kind of things they avoid, and what kind they pursue."
—Antoninus.

By chance I was searching English medical journals for a special item two years ago, at the time they were containing obituaries of Sir James Paget. My attention was held by the ring of personal affection and esteem in practically every mention. Their essence seemed to be: He was a great surgeon and pathologist, an ideal teacher and lecturer, and the best loved of his profession in Great Britain. Any one of these records in the book of fame would satisfy a large majority; and the wish arose to learn more of their combination in a single individual. The question came to mind: How far may the personality of a scientific man be revealed by his writings?—"the subtlest form," Phillips Brooks has said, "in which biography can take its shape."

In this attempt to answer the interrogation concerning one so lately living and known to many others, whatever of presumption there may seem to be will, I trust, be overlooked in view of the fact that my motive is that his good influence may be prolonged by better acquaint-

* Read before the Rhode Island Medical Society, June 5, 1902. Published by courtesy of the Committee on Publications before appearing in the Transactions. (A bibliography of Sir James Paget will appear in the Transactions.)

ance with his good life which I hope to interest you to make. I shall endeavor not to trespass on his Memoirs, lately edited by one of his sons, but to leave them for your own reading.

HIS EARLY PAPERS SHOW ORIGINAL OBSERVATION.

It is always interesting and often instructive to trace success to its beginnings, to estimate how far from them it advanced and along which of the early lines. There is a fine consecutiveness of development in the writings of Sir James Paget that indicates persistency of purpose and well-balanced judgment. When he was 20 years old a little book appeared by himself and his older brother Charles, "The Natural History of Yarmouth." The entomology was written by Charles, the botany and introduction by James. Curtis, in his British Entomology, calls it "an invaluable abstract of local information, and an admirable example, which I hope to see followed in every county." In the *Lancet,* thirty-two years later, is a letter by him in reply to a request for information, telling of an event in his first year in medical college with which every student of science must feel a thrill of gratulation. He saw the same "spiculæ of bone" in the flesh of a subject in the dissecting room that teachers, pupils and scientists had noticed in other subjects. But Mr. Paget, barely 21, "an intelligent first year student," with the habits of a naturalist such as any boy may acquire, looked closely through his lens, saw that the spiculæ were cysts, in each a coiled up worm; and so, in 1835, *Trichina spiralis* came to be known, a scientific discovery, as Dr. Cobbold, an authority on entozoa, says, "one of the happiest to which Englishmen can point." A good introduction to fellow-students and teachers it certainly was in those early days of the microscope.[1]

The first paper I find with his signature is in the *London Medical Gazette* three years afterwards, and during the first decade of professional life papers appear each year. We notice that home journals and foreign quote them or refer to them with approval; justly, for they have characteristics not commonly found even in older writers. He signs himself "M. R. C. S., Demonstrator of Morbid Anatomy and Curator of the Museum at St. Bartholomew's Hospital." He then adds "Surgeon to the Finsbury Dispensary," and later, "Lecturer on Physiology and Warden of the College at St. Bartholomew's," or "Lecturer on General and Morbid Anatomy." In those days of the infancy of pathology, physiology and museums, these offices could hardly have brought much income. He writes almost exclusively on minute anatomy and physiology, and translations or reviews of scientific work. These two items—his positions and his subjects—with the fact that the numerous papers evidence much time spent in original observation in museums and dissecting room, and much more time in reading many French, German and Dutch, Latin, Italian and English authorities, justify the conclusion that private practice was small, and that he was working faithfully to gain an income and for love of his profession.

His first subject is "On some of the diseases of the papillæ of the cutis"; other titles are "On the blood vessels of tendinous tissues," "The influence of madder on the bones of growing animals," "White spots on the surface of the heart, and the frequency of pericarditis," "Obstructions of the branches of the pulmonary artery." His object in each is to contribute something from his own observations of preserved specimens or of fresh anatomic material, or of his experiments in physics, physiology and chemistry. He outlines the ideas of others, correlating his own, and referring in footnotes to original authorities or to catalogued specimens. In the first essay are very noticeable his methods and even vocabulary of botanic study. His naturalist's habits of close observation, careful reasoning and accurate description are demonstrated by the writings of this period to have been, beyond doubt, a very large part of the foundation on which success was built. "Very, very few are the men," Dr. Billings writes, "who can by and for themselves see and describe the things that are before them."

A WRITER ON PROGRESS IN MEDICINE.

During the second half of these ten years he regularly contributed annual reports of progress in anatomy and physiology to the *British and Foreign Medical Review.* With their abundant references to authorities in any of six languages they are marvels of condensation and analysis. They testify to his good judgment in discriminating between authors and selecting from their observations, manifest now after sixty years. They show rare thoroughness and extent of reading, justice and courtesy to authors and readers, straightforwardness of purpose to present fairly and to make his material as useful as possible to others. It was a high compliment to so young a man to be connected with Dr. Forbes on this remarkable quarterly that probably has had no superior among English periodicals and that did much to raise standards of medical literary work.

We also discover him listed among contributors of articles (unsigned) on surgery and anatomy to the *Penny Cyclopædia.* Special mention should be made of his seventy-five (approximately) sketches of early physicians in Long's Biographical Dictionary, some of them indicating that he criticised their works after his own thoughtful reading. Such study of professional careers by this keen young observer must have implanted many ideas of what is most and least worth while in the conduct of a physician's life, and, with his extensive scientific reading, have had a profound influence in molding his own. It must also have had some considerable share in cultivating his later exceptional ability and interest in character study.

We next find him signing himself "Assistant Surgeon," and publishing his "Lectures on Surgical Pathology" given before the College of Physicians, from which we infer that the preceding ten years of unusual industry were beginning to materialize in professional and financial returns. His writings in those years give evidence of capacity for the hardest mental work and of ambition to serve along every line in his power, pathology, histology, anatomy, physiology and literary effort. He had utilized his minor offices to their fullest extent for acquiring a liberal and accurate fund of information, and by publishing so much he indicated his spirit of helpfulness. His essays are characterized by simplicity of style, accuracy, conciseness; a logical sequence of thought that makes reading easy; a faculty of seeing much in common subjects; a fondness for tracing back to principles, of fitting facts to facts, that adds to the interest and usefulness of what he writes and leaves an impression of truth. They show much shrewd sense, and a love of justice in giving credit where it best seemed to belong. One concludes the author to be a hard-working and alert student, a helpful, stimulating teacher, a young scientist of sincerity and independence without egotism.

1. The history of this discovery is interesting from several viewpoints. It can be traced in The Lancet, 1866 (Paget, Wilks, Presidents of Abernethian, Cobbold and others); Lond. Med. Gaz., 1833 (Hilton), 1835 (Wood, Farre, Owen).

As we glance over those Annual Reports and later writings we find such names as Schwann, Vogel, Henle, Kölliker, Nägeli, Virchow, Pasteur; Liebig, Purkinje, Claude Bernard; Broca, Flourens, Marshall Hall; Darwin, Huxley; Helmholz, Faraday; Dalton, Draper and scores of others that recall vividly to mind the fact that James Paget by his reviews, translating and experimenting was helping introduce the very earliest reports of revolutionizing ideas that flooded periodicals after the invention of the compound microscope: the protoplasmic cell replacing John Hunter's "vital fluid"; the contention of *omnis cellula e cellula* and spontaneous generation; bacteriology, preventive inoculation, serum therapy, parasitic diseases; antisepsis and anesthesia; pathology, histology; our modern physiology and organic chemistry; the laws of atoms and molecules, of electricity, of conservation of energy; the theory of evolution; our knowledge of the nervous system, of reflex action and cerebral localization. Many of these one will recognize as having been a battleground for popular prejudice or for professional myopia.

PAGET'S AVOIDANCE OF CONTROVERSY.

But we find no hint of contention, no "personalities" in what he wrote. He showed sound judgment in selecting "facts, probabilities and guesses" from pages teeming with them, proving himself a cautious thinker who led, as teacher and writer, so discreetly as not to need to retrace his steps. His peaceful course was in part due to his large knowledge that enabled him to look on many sides of the subject, to his truthfulness and zeal for progress that guided him along right lines; to a tactful method of presentation, passing by logical steps from one thought to the next, no assertion without correlation, avoiding non-essentials that might antagonize, and a trained insight taking him to the heart of the subject with clear and simple words. His discussion of antisepsis in 1879, read with other addresses and remarks in the same volume, illustrate this, particularly his pithy common sense, "A patient ought to be cured with as little risk to his life as possible"; "It is not enough that he just escape with his life"—the debate being on whether "partial antisepsis" (cleanliness) was not "just as good," its statistics showing up so well.

He was a leader in matters the subject of controversy yet not a controversialist. By request, I imagine, he wrote for two lay journals on the alcohol question and on vivisection. Dr. Oliver Wendell Holmes condenses his own philosophy in not being drawn into these affrays, in the Professor's "hydrostatic paradox of controversy." "You know that if you had a bent tube, one arm of which was the size of a pipestem and the other big enough to hold the ocean, water would stand at the same height in one as in the other. Controversy equalizes fools and wise men in the same way—*and the fools know it.*" Sir James Paget with his love for humanity and understanding of "the falsehood of extremes," says: "Of course, among the opponents of experiments on animals there are several very different groups, and with some of them it is useless to appeal to reason. Some have committed themselves to the agitation, and can not recede without discredit or more material loss, and some are carried on with so strong an impulse of a mind once made up that they can not pause for a revision of their judgment. . . . That which is most to be desired is that persons with fairly balanced minds, with at least an average both of humanity and of capacity for judgment in cases in which deep feeling may be stirred, should study the whole matter, and judge of experiments on animals as they would of other practices in which utility or even pleasure is pleaded as justifying the infliction of pain."[3]

Concerning total abstinence as the only sure remedy for intemperance, "Here, I can only doubt," he says. "I should think that in this, as in other things lawful yet tempting to excess, the discipline of moderation is better than the discipline of abstinence. But it is certain that we have no facts at all by which to estimate . . . .; we have nothing from which we may make even a fair guess, or which would justify a great experiment. . . . But some will say, what is this moderation? How may we define it? Let those who thus ask try to define, to the satisfaction of any ten persons, what, under all circumstances and to all people, is moderation in bread, or the wearing of jewels, in hunting or the language of controversy."[4]

On both topics he wrote with wide outlook and frank courtesy. Later he spoke on "Science versus Classics" in education, also on "Theology and Science," to which we shall return. Natural law in sociology as in physics seems to be that a centripetal "conservatism" and centrifugal "radicalism" are necessary to generate the median line of true progress. He was in neither extreme, however they may have influenced him, but steadily in the line achieving progress. Yet with all his moderation he could on occasion excel in scathing displeasure, as two or three short notes concerning unethical conduct bear witness.

QUALITIES OF HIS CLINICAL PAPERS.

Reports of his clinics at St. Bartholomew's are found after 1847 for twenty-four years, nearly every week in either the *Gazette, Lancet,* or *British Medical Journal.* While not his writings their brief consideration here may be allowable since they are records, sometimes by shorthand or revised by himself, of his extemporaneous speaking and of his operating. They bring him before us with more reality than do his essays as an accomplished diagnostician, skilful, prudent, ingenious operator, and wise and interesting instructor. We see him as deservingly a leader here as he was along corresponding lines in science and as hard a worker. He was prompt to test new methods, resourceful, original, careful in details, humane; his comments showing again his spirit of helpfulness, sympathetic understanding of students, clearness of expression and thought, large information and experience.

So admirably do these frequent reports reflect the actual surgeon and teacher that one could wish the useful and sometimes brilliant clinics of our own distinguished surgeons could have been or could be preserved with regularity and accuracy in our journals. They would be, as those of Sir James Paget now are, valuable portraits for historian and biographer, as well as helpful to readers not privileged to be present; better often than some of our papers and duplicated abstracts.

It may be admitted of reports of cases and clinical papers that, unless one has some special interest, the majority are read, when they are read, rather from a sense of duty and with uncomfortable effort of mental application. The clinical writings of a few are exceptions, and among the few is Sir James Paget. It is a common experience after reading his first sentences to

3. A characteristic reply follows in Fortnightly Review, 1882.

4. In closing a discussion, carried through several evenings, on the pathology of alcoholism, he comments upon the amount of uncertainty in every subject of this kind when discussed by those who have seriously considered it and are competent to form an opinion; contrasting it with the positive statements by those who know comparatively little of the matter.

continue from genuine interest. Perhaps we may specify a few of the qualities to which the attractiveness is due. His introductory words are simple, are clear and present a genuine thought lighting up his subject. Continuing with easy expression, with rarely a superfluous word or statement, each sentence a definite addition to the development of his thought, his presentation is completed and the reader has found no place to skip because irrelevant or wordy, no weariness because obscure or difficult; but the pleasure that always goes with old ideas well put connecting with new ones evidently true and of value. He has succeeded in what was apparently his wish—that his experience should be as genuinely useful to others as his description can make it.

His clinics and clinical papers, his discussions of cancer and pyemia can well be called, in his words, "Some of Time's old mirrors, upon which, if our thoughts be directed aright, they may be reflected in lessons of wisdom which we may contemplate to our own instruction. . . ." The lecture from which I quote testifies to his scientific spirit in the daydawn of science, to his faith in the future of scientific medicines, his broad philosophy; and it contains an historic bit of humor. While looking through eighteenth century records (to which his happy phrase, "Time's old mirrors," refers) for the origin of the Arris and Gale Lectureship, he finds that at one time the members of the Company of Barbers and Chirurgeons were most indifferent to these lectures on anatomy and surgery. At an executive session it was unanimously voted that each of them who at any time "should attend any of the lectures on anatomy to be delivered in the theatre, should be entitled to and receive the sum of 5 s. out of the cash of the Company." Professor Paget calls this "very cheap devotion of themselves, the principal members of the profession, to the personal encouragement of scientific teaching," and states that not until 1803, when the Company of Surgeons became the College of Surgeons by Royal Charter, did they abolish this "bounty of 5 s. for listening to the Professors."

ADDRESSES AND LECTURES.

In 1862, at the first meeting held in London by the British Medical Association, Mr. Paget gave the Address in Surgery, his subject being "The management of patients after surgical operations." For us of 1902 perhaps no more graphic sketch can be drawn of the state of the best surgical thought and practice just when Pasteur's brilliant investigations of ferments were focusing the observations and hypotheses of others in the question: Why may not communicable diseases, puerperal infection, pyemia, have their origin in germs and be preventable? As became a teacher Mr. Paget did not attempt to answer the speculation; but he impresses us with the urgency of its being the next thing for science to clear up. We see how an earnest, honest, acutely observant, keenly intelligent, humane surgeon struggled in the darkness to find light. In simple words he tells of rigors. "What is the meaning of this strange shuddering preceding, as it so often does, some of the most fearful maladies we have to deal with?" After outlining an autopsy, he says: "We must believe something from the seat of operation passed into the blood and utterly spoiled it." He tells of the improvements in surgical methods by which "we are adding constantly to the list of things that may be done to save life. But on all this, which might be so bright, a cloud rests like a dark pall." The simplicity of his words and the intensity of his searching thought become eloquence, and the impressive picture thrills us who see the answer to all he asks just within his grasp. Many years after, in a plea for acquiring early habits of scientific observation, he said: "It would be a very useful book, I think, if some one would write . . . . a history of the oversights . . . . of things which have been under men's feet, plainly before their eyes. . . . ."

A lecture on "Dissection Poisons" is of special interest because his study of a nearly fatal illness of his own. Commenting on his loss of the immunity which he used to have when dissecting daily, he says: "How it comes to pass we can not surely tell, but the fact of an acquired immunity seems certain. I wish some of you would study these immunities more than any one has yet done. They are of infinite interest in physiology . . . and of still more interest in pathology." This was ten years before the incident of Pasteur's forgotten culture-flask of chicken cholera microbe—the beginning of scientific study of immunities.

FORESHADOWINGS OF DISCOVERIES.

In many other of Sir James' essays we find foreshadowings of scientific discoveries. So extensive and accurate was his information that, knowing the existing limits of knowledge, he looked beyond the barriers with wisdom and courage to indicate where these might and should be broken through. And not infrequently he led the way, as in his "Disease of the Mammary Areola," "Osteitis Deformans," and other papers.

Underneath, throughout and over all his teachings is found by his constant example and speech this precept: The future usefulness of the profession lies in scientific progress; this is to be built up by facts from allied sciences that stand the test of clinical experience, and by our own accumulated clinical studies according to scientific methods; but our first business is to cure the patient, and we are and long will be certain of many remedies which we can not explain. Scientific study carried along with practice he never loses an opportunity to urge and to commend all through his professional record, whether in address, essay or biographical sketch. His criticism is constructive; encouraging, instructing, stimulating. He was a utilitarian in the sense that he valued knowledge and endeavor, and even pleasures, in proportion as they better the individual and society. The "utility of science" is a favorite topic.

His addresses on formal occasions, as the opening of annual sessions or new institutions, his presidential addresses before clinical and pathological societies, the British Medical Association or International Congress, commemorative addresses such as the Bradshawe, Morton, Croonian lectures, light up still more the features of his portrait we have discovered; but the temptation to quote must be cut short. One must often admire the plasticity of simple English as he adapts it with so much ease to fine shades and strong expressions of thought. These addresses bear witness above all to his being a philosopher—a lover of wisdom who does not find it in isolated facts, but rather in such a joining of them together as to create a compact force for good. His intellect traveled around and through his subject, fitting in and adjusting the new-found truths. His chief motive in addressing non-professional audiences was to correlate scientific work with popular life as part of the whole progress of humanity. Indeed, he believed that the general study of science would be the most efficient protection against quackery and anti-science.

Many titles excite one's curiosity, as "The Cause of Rhythmic Motion of the Heart," "Rare and New Diseases," "The Chronometry of Life." I would not men-

tion his "Elemental Pathology"—my own happiest of introductions to his writings several years ago—if it were possible to deny myself the pleasure, it is so fully spoken of in his Memoirs. Of this and his Hunterian Oration one must say, read both, for none will deny them place among our classics. The former traces the likenesses and unlikenesses between human and plant pathology. Before one advances far into this wealth of novel scientific ideas so charmingly set forth, one involuntarily exclaims: "What an interesting man this must be!" We are reminded of Washington Irving and his fluent grace; of Thoreau observing nature so minutely, and seeing in familiar details so much more than the material facts; of Dr. Holmes and his sagacious philosophizings; but the author in "Elemental Pathology" stands out pre-eminent as the brilliant scientist.

He questions into the coloring of autumn leaves and why they are symmetrical as, when younger, he speculated on the causes of pathologic symmetries in man. Many more foreshadowings of scientific discoveries are here, e. g., "In these galls and other similar diseases in plants, we have, it seems, hundreds of specific diseases due to as many hundred specific morbid poisons." After outlining the insect diseases of plants with a suggestiveness that pervades the whole address—for which "fascinating as any romance" is none too much to say—he adds: "It would be difficult to find a field for the study of the very principles of pathology larger or richer than this offers to you."[5]

HIS RELATIONS TO STUDENTS AND EDUCATION.

That he was invited to give so many addresses to students, and their content as well, make us believe him popular among his juniors. They have the same tactful courtesy, practical good sense, earnestness for industry, for scientific medicine and for high principles. He believed in honorable competition since it is a stimulus to better work for ourselves and for the community we serve; and humorously introduces this subject in an address before a "rival" Provincial college by the three queries: "Can one's rival be abolished? If he can, ought he to be so? If he can not, in what condition is it best to have him?" He believed in frequent examinations; "they are the best means of learning how to keep knowledge in such a form that it may be always ready for use." They are excellent training "in the art of thinking during anxiety and other mental troubles." He tells how to pass them, and how to cram for them; about recreations to get back "a clearer head, a stronger will," about how to succeed in practice and the rewards: "Competency of living; the society of educated men; blessings from the poor; recompense, with gratitude, from the rich; boundless fields for intellectual exercise; access to the richest stores of knowledge, for the glory of the Creator and the relief of man's estate; daily inducements to the exercise of the highest Christian virtues." But not wealth, ease or high social or political influence. He teaches that professional success is more in proportion to knowledge than to anything else; but inadequate knowledge is not so great a bar to success as are certain personal defects, such as self-distrust, unbusinesslikeness, discourtesies, disparagement of others. When it is said that a man's success is greater than he deserves, study that man. He probably has some good quality that enhances his professional skill—such as close attention to his cases or the rare gift of common sense. "There is nothing incompatible in intellect and good temper. Knowledge and good manners are not mutually exclusive; the same mind may be scientific and businesslike." He is enthusiastic in presenting the usefulness, dignity and honor of the profession.

His emphatic advice to undergraduates is to "first, last and always combine the study of actual practice with that of the principles and foundations of our profession," . . . "from the beginning to the end of your career, and day by day you must study diseases and their treatment in actual practice. There is nothing of which the observation of the careers of students has made me more sure than of this." Excepting university men with high degrees, "as a constant rule, the best students, and they who have proved themselves the best, not only in the schools, but in after life, have been those who, in the beginning of their studies and for the most part before attending lectures, have been pupils in the provincial hospitals or with active and intelligent general practitioners, who have enabled them to see practice every day and helped them to study it. I am aware that this opinion—that the study of actual practice should extend through the whole period of medical education—is not held by some who have carefully thought upon the subject. . . . . Much of our first learning consists in learning to know things by sight and by other senses, before any consideration of whether we understand them; and much of technical language and of mere routine must be learned, which any one may learn, whether he understand them or not; and many things may be learned and remembered which we may afterward come to understand. And besides all this, there is in practical medicine and surgery a great deal of knowledge which can not yet be, in any proper sense, understood; that is, which can not be reduced to principles, or connected with any laws of physiology or other parts of medical science. Yet it is real knowledge, true and very useful; and it can be gained only in the study of actual disease and its remedies; and there is so much of it that in all the time you can spare, through the whole period of your pupilage, you will not be able to learn it all. But learn all you can of it; for it is eminently the kind of knowledge which is useful in practice, and of which, as years pass on more and more will be incorporated in the true science of medicine. . . . . I do not advise you to study practice to the exclusion of these things [science], but to study it with them and with their help." Elsewhere he speaks of the early special education of the senses "which can hardly be begun too soon and which becomes more difficult the longer it is deferred."

HIS VALUATION OF SCIENCE, CHARACTER AND THEOLOGY.

These opinions he held before 1865, and again in 1890 he says: "You hear a good deal said by some that science is the only way to success; by others that practice is the only way to what is right. After watching for a great many years I am disposed to tell all students now—and I think the rule may hold good for others besides those in medicine—both those should be worked together." After urging faithful devotion to science before and after graduation, he says concerning the belief of some that success in both science and practice is not probable: "it is quite as absurd as the talk that scientific men can not be good men of business, or that they can not have a love of art, or that they can not fully entertain the Christian faith."

One of his opening addresses to students at St. Bartholomew's closes: "But above all, be sure that your

5. It is interesting in this connection to note Dr. S. Weir Mitchell's recent offer of a prize of $50 (annually for a short period) for investigations of the causes bringing about the autumnal coloration of plant parts.

knowledge be not polluted by any irreligion . . . for it is only by joining the study of Revealed truth with that of science, that our science can be perfect. For we stand, as it were, in the centre of an area of light and truth, and whichever way we move, except in one, we come too soon to the twilight, and then to the deep darkness, of that on which the light of science has not yet shone. But, in that one direction there is no twilight; there, if we follow in the line of truth, and do not with a mad conceit refuse the proffered help—there is the path of Revelation, and there the light of science is not lost—it merges in the more glorious light of faith."

"Theology and Science," an address given to students preparing for ordination at the Clergy School at Leeds, might well have for its sub-title, "the philosophy of controversy." He was at that time 67 years old, and it may be taken as his mature thought by which he guided his own conduct. He finds it "a law of our nature that, on all doubtful matters, the vast majority of men refuse to wait for knowledge, and arrange themselves in parties, each of which maintains that itself is sole possessor of the truth." He says it is well to remember that this seems to be "a law of our nature" because it may help to show that some antagonisms are not wholly the fault of those engaged or of the subjects which they discuss. Here we find one of the epigrammatic comments so frequent in his writings: "We love to hold by what we think, for what we think has in it more of ourselves than what we know."

He argued that modern specialization is unifying knowledge and will eventually fill up the intervals by which our beliefs now stand apart: "For future knowledge will not be merely heaped up on the surface of that we now possess; it will penetrate the mass and fill its gaps and interspaces, and make many things one which as yet seem multiple and alien"; as its growth has harmonized many truths apparently in discord, so will it again in science and revelation, although perhaps not in just the ways we anticipate.

HIS SKETCHES OF OTHERS SHOW HIS OWN CHARACTER.

His personal relations with others as shown by his writings were courteous and generous. He was also a keen reader of character. His essay, "What Becomes of Medical Students," indicates that his former position as Warden gave him opportunities which he embraced for comparing early tendencies and their results in after life. This unique analysis could well be reprinted and made easily accessible in every medical college reading room. Its statistics and comments are as impressive as a laboratory demonstration. His conclusion is: "There is scarcely any mental capacity of which the results may not ,in the long run, be surpassed by those of constant strong willed resolution." Of his masterly appreciation of John Hunter as man and as physician he says: "After having studied Hunter's life and all his defects of temper and of general culture, of social skill and of all the arts of pleasing, nothing has seemed clearer than that the power of a great intellect, with a strong will and a right aim, is, in the competition of life, sufficient and irresistible; and that, among all the intellects and wills that I have studied, not one was stronger than John Hunter's." But that he would advise another way to success he leaves no doubt.

His life sketches of contemporaries are interesting, not only as studies of character, but as showing what he valued in men's lives and wherein he thought lay failures. Of two promising careers cut off in middle age he says: "Such were the Ormerods. I believe it is not only my affection for them that makes me think their lives should be recorded, both for just praise and for lessons that may be read in them. I only wish that my record could teach all that I studied in them, for to have known them . . . . is one of the responsibilities of my life. Chiefly, they were very dutiful. Whatever came to be their duty, whether through choice or circumstance, they did it with all their might. . . . . And they did not go far away or take much thought to find where or what was their duty. It was always at hand, in the common business of their calling, or if beyond this, in the nearest and best work for which they could fairly, or even modestly, think themselves fit. . . . . Turned from the course of life they wished for, they went into that which then seemed best, and did their best in it. With equal patience they endured the weariness and pain of disease; and not only with patience, but with hope. . . . . They had studied human life in all its aspects and had learned nothing concerning it of which they were more sure than that it was benevolently designed to be the way to an eternal happiness. . . . Over all that were associated with them they had the influence accorded to those who are respected for being always just, virtuous and very prudent, though, on just occasion, not afraid to maintain hard truth; over intimate friends they had, besides, the influence of those who are loved for wisdom, purity, tenderness and watchful courtesy."

It was probably by wise design that he published these and certain other character sketches in the Hospital Reports (St. Bartholomew's) where generations of students can read them.

Of one physician he says: "The rare charm of his personal character moved many to work with him and multiplied the power of his own work." He speaks often of the ability to work with others harmoniously as one of the most important qualities for success. Of two he says: "They included in their duty the striving to find everywhere how they might do more good than in the same conditions had ever been done before." Of another: "He was a strong instance of that fault that sometimes goes with honesty; he was so sure that his convictions were the result of hard and well-intentioned study; so sure that he sought the truth, and sought it on the right way, that he was wholly unable to believe that any one, with equal honesty and almost equal industry, could arrive at conclusions different from his own." Another "was a many-sided man and on all sides good." He likes to mention "the personal and social qualities commanding the confidence of the public. He was gentle in voice and manner; cheerful, warmhearted and kindly in his judgment of others; firm in his friendship, and had a tender-hearted love of home." He loses no chance to commend in their lives any study of natural science which they have kept up, as Edward Ormerod's study of wasps, and several times mentions carpentery as having been a recreation. He especially commends simplicity, clearness and accuracy of speaking, teaching or writing, originality, orderliness, painstaking and dexterity.

In one admirable character sketch he approves business and executive ability. "He was prudent and judicious." "He acted discreetly, persuading, not trying to compel." "He could work with everybody, not because he tried to let everybody have his own way, but because he was always patient, calm and courteous." In debate or controversy "he was liberal, forbearing, gentle." "Everywhere he was a peacemaker."

We believe it legitimate inference that one who so persistently noted these several traits in others, and

whose writings for half a century serve as a confirmatory context, must have modeled his own life accordingly. In a most graceful and tactful address as President of the Section of Surgery of the British Medical Association at Norfolk, in his native county, he recalled the several surgeons he had known more than forty years before when an apprentice, with affection and fine discrimination crediting the good qualities of each. Thus honoring their memories he still more, quite unconsciously, honored himself by disclosing the nobility of his philosophy of judging and remembering others. His frequent appreciation of the good in past work, in history and in men past and present, seems one with his reverence for universal good, with his respect for the individuality of others, and his interest in his students. It could have been no small factor in his influence and in his hold on the affections of others.

While wandering through highways and byways, on southern mornings, searching for an old plantation house, the air musical with bobolinks and mellow voices of toilers in the cotton fields, the Cherokee rose and yellow jasmine swaying out from boughs of stately pines, radiant sunshine and grateful shade, when the homestead was still quite distant, I have felt my quest was nearly ended by a consciousness of some subtile fragrance—all pervasive, yet so delicate as not to be described or easily perceived, even on close approach—the fragrance of the old box borders in the garden; a breath far wafted, yet so elusive that consciousness of it is stronger than of the source from whence it comes.

And so, in tracing Sir James Paget's character through the grace and polish, the science, wisdom and philosophy of his essays and addresses, in addition to the qualities we can indicate, is a subtile, all-pervading attractiveness of personality that we can not find words to make clear; and by our failure we understand better than before the feeling with which his son wrote the last words of his brief preface to the Memoirs: "Other friends have contributed accounts of him as they best knew him. But, for all the good help that has been given the book is not worthy of his memory."

There is no life chronicle—at least I know no other—fitter to put in the hands of a medical student for his help in college days; of a physician for his guide to living in the "waiting years," his wise friend in success, and his consultant in the years of ripening and passing on; and all the charm and interest of its autobiography, its events and quotations have been left quite untouched for your own individual fresh enjoyment; to be supplemented as often as may be by his writings themselves.

Feeding the Cow.—Dr. C. L. Case of Ramona, Cal., has been reading articles on infant feeding and expresses surprise that none refer to feeding the cow to secure suitable milk. He writes to *American Medicine:* "This is the plan I follow: A healthy cow is selected with a calf as nearly as possible the age of the baby, older rather than younger, if a choice is necessary. The cow is given dry feed, plenty of hay and bran, and no green feed for the first two months, and above all no bitter weeds. To begin with I order 2 oz. of boiled milk, 2 oz. of boiled water, 1 oz. of limewater, 5 grains of white sugar, and 1 grain of salt every two hours, to be put into an eight-ounce graduated nursing bottle with no tubes. I gradually increase the milk about ½ oz. each month for each feeding. I also increase the sugar and salt in proportion with the milk, but the other ingredients I leave the same in quantity for about nine months, when the child usually passes from under my care and begins to eat with the family. The intervals between feedings are to be increased 15 minutes each month up to six months and night feeding done away with as much as the child will allow."

Special Article.

BLOODLESS OPERATIONS FOR THE REDUCTION OF DEFORMITIES.*

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VIENNA, AUSTRIA.

INTRODUCTION.

Complying with the request of your president to appear before this distinguished audience, I must begin with the admission that I feel myself to some extent embarrassed. The reasons for this embarrassment are obvious. More than anything else the feeling disturbs me that I may stir up your resentment by the ill-usage of your fine language—that with every word I may commit the offense which the Frenchman so cleverly calls *ecorcher sa langue*—"to flay his mother-tongue."

Another reason for my disquietude lies in the entire and extraordinary situation in which I find myself through the boundless hospitality of Northwestern University—through the conferring of the degree of "Doctor of Laws" by which I may enjoy the distinction of belonging to the university as an honorary member. I can only assure you that I know how to prize highly this honorary degree.

I must here remark that in the Old World also an honorary title has been given me. You know very well what a great part titles and orders play in the Old World. The title which was conferred on me by His Majesty, the Emperor Franz Josef the First of Austria, reads: "Imperial Counselor of the Government."

Now this old and this new title have a certain inner relationship. This relationship consists in the fact that, without doubt, I am the worst counselor of the government and quite as much without doubt the worst doctor of laws anywhere to be found; for I understand fully as little about government as I understand about laws.

From this it seems to me that the distinction of a degree is so much the greater, the less a man is entitled to it by his respective knowledge. And, therefore, I prize the honor which has been conferred on me through the bestowal of this title of a "Doctor of Laws" as one so high that I feel myself entirely unworthy of it.

If, nevertheless, I accept this honor, it is because I look on it not as a personal one, but regard myself only as the agent of courtesy which the Northwestern University desires to bestow on the long-celebrated School of Medicine of Vienna, a member of which it is my greatest pride to be.

This honoring of one school by another is a beautiful expression of the always deeply-rooted feeling that science is one united power which throws a common bond around all nations; that there are, especially for the medical art and science, no separating boundary posts, no dividing ocean, no different nations. The science of medicine joins her adepts around the world in a great brotherhood, whose common highest law is the law of humanity and brotherly love.

In this sense I accept with deepest thanks the distinction that has come to me, and ask your forbearance and goodness if I shall endeavor in the following to bring before you some remarks of a general nature concerning the character and object of bloodless operations.

THE POPULAR IDEA OF SURGERY AS BLOODY.

The terms "surgery" and "bloodless" appear at first sight, according to general comprehension, each to exclude the other; for surgery is known more than anything else as a bloody art. And yet the word surgery means nothing else than handicraft, technical skill or dexterity. What the hand creates need not mean the shedding of blood. The hand can also caress and coax. But the coaxed of the surgical hand have always certainly a dubious character. In order to characterize bloody surgery, one must speak of it as surgery with the knife. The layman can not conceive the surgical hand otherwise than

* An address delivered before Northwestern University, Nov. 28, 1902, at the conferring of the honorary degree of Doctor of Laws on Dr. Lorenz.

armed with the knife. He thinks as the German poet, Uhland, writes, of the hand of the barbarous king whom the minstrel cursed: "Und was sie schreibt ist blut"—and what it writes is blood!"

The surgical therapeutics of the ancients armed the hand of the surgeon with fire and sword, as is seen from the old sentence: *"Quod medicina non sanat, sanat ferrum, quod ferrum non sanat, sanat ignis, quod ignis non sanat, sanat mors"*—"What medicine does not heal, the knife heals; what the knife does not heal, fire heals; what fire does not heal, Death heals." The flaming sword or the glittering surgical knife should, according to the rule of the ancients, be held by the strong hand of a young man. Ancient surgery demanded in fact the following qualities from the surgeon: *"Chirurgus autem sit juvenis, visu alacri manu strenua nec unquam trepidante; sit im misericors,"* etc.—"The surgeon must be young and gifted with a sharp eye and a hand that never trembles; be merciful," etc. One, indeed, need not wonder that the poor sick man in past centuries perceived in this barbarous, sharp-eyed youth, armed with fire and the sword, the typical surgeon of that time—an executioner rather than a savior. To that was added the terrible certainty of feeling without any relief every motion of the knife, every touch of the glowing iron. Then when the terrible torture was past and the brutal work of the surgeon was finished, his responsibility was at an end, for, to speak briefly, the course of the wound was left more or less to favorable or unfavorable chance.

A celebrated French surgeon of the middle ages, Ambrois Paré, used to say, after the completion of his operation, *"Moi, J'ai vous ai opera, Dieu vous guerisse"*—"I have operated on you; may God heal you!" Modern skill has taken from the dismal picture of ancient surgery much of its terror. Although the surgeon of to-day does also work with fire and the sword; although his eye is sharp, his hand is sure and never trembling; yet his heart is filled with mercy and all his transactions are determined by a feeling of responsibility for his acts. With the finishing of the operation, his responsibility is not at an end; perhaps, in truth, it first begins here. The course of the treated wound is no longer dependent on accident, but will be determined by the sure skill of the antiseptic and aseptic. If the cure does not take the course desired, the modern surgeon no more prays, *"Dieu vous guerisse,"* but he asks himself: "Wherein lies the mistake that I have made?"

If the bloody operation under the protection of modern asepticism has, for the most part, lost its dangers, so it has also, through the help of narcotics, been deprived of practically all of its horror, and dreams may flit about for the patients in those critical moments when the hand of the modern surgeon invades vital organs of which the ancient surgeon had not the remotest idea.

THE FEAR OF THE KNIFE.

But notwithstanding all the progress of surgery and the surgeons, it remains a distinguishing characteristic of human nature to fear the surgical knife and the loss of some of the costly fluid which all vital energy kindles and holds. "Blood is a special kind of sap," very rightly says the poet, and so thinks mankind.

The fear of the knife, however, rules not only the lay public; the doctors also, including the surgeons, do not remain exempt from it. I knew a great surgeon whose daily occupation it was to rummage in the bowels of his fellow mortals, and who himself was so shy of the knife that he could not come to the decision to allow an infectious abscess to be opened with the knife, and who preferred to await in pains the spontaneous breaking of the abscess.

Concerning this, different nations are to different degrees shy of the knife. In general, I have received the impression that the Americans, as a whole, are much less afraid of the knife than are the Europeans. I believe that the American would allow himself to be quartered if thereby he could reach his goal. The greatest fear of the knife rules among the Orientals. The Mohammedans, as a rule, flatly decline an operation, and prefer to allow the celebrated prayer, *"Alah il alah Mohammed rasul Alah!"* to be written on a plate by the hand of a priest, after which they wash off the ink and make use of the water as a remedy. The inhabitants of the Balkans, also, in so far as they are not Mahommedans, characterize themselves by a high degree of fear for the knife and by great vulnerability. It is not easy to compel them to agree to an operation.

Indeed, there is a fear among these shy of the knife that is still greater than the fear of the knife itself—it is the fear of the certain death near at hand, if a life-saving or a life-prolonging operation be omitted. In this lamentable situation there disappears among most men the fear of the knife, and we see that under such circumstances the affair changes sides. The patient begs for the knife and the conscientious surgeon sees himself often enough compelled to deny the request of the patient. "Surgery may not be drawn down to the level of the quickening position," one of my teachers used to say. Speaking in general, the surgical knife remains the *"ultima ratio,"* to its own harm, according to the old rule, *"Principiis obsta,"*—"Resist the very beginnings!"

We can calmly say that with the position of surgical skill at the present day and the high moral worth of contemporary surgeons, the fear of the knife by the layman is unfounded, and the educated public has, for the most part, removed this fear to a distance. There is, however, also a well-founded fear of the knife. This fear of the knife, I conceive when the knife is not the only, and, indeed, not the best means to bring about the cure.

ORTHOPEDIC SURGERY.

Such cases in which the knife does not present itself as the best means for healing belong particularly to the province of orthopedic surgery, that branch of general surgery which concerns itself with the treatment of the misformation and crookedness of the human body, especially in the case of children. In orthopedic surgery the endeavor has been made from remotest times to solve the problems of therapeutics in a bloodless way. But these efforts were nearly fruitless, since the means were entirely insufficient.

A celebrated example of the fruitlessness of this endeavor is afforded by the English poet, Lord Byron, on whom a freakish nature bestowed not only poetic genius but also a club-foot. He carried the club-foot to the end of his life. One of his biographers tells us that Lord Byron in his entire life could not get away from two things: his club-foot and the hypocrisy of his people. A still more celebrated example of the incurability of club-foot with the means then at hand as bloodless surgery is offered by Cardinal Richelieu, who took his club-foot with him to his grave. No more than club-foot could other deformities be brought to cure by the means then at hand in bloodless surgery.

THE DISADVANTAGES OF BLOODY ORTHOPEDY.

From this manifest fruitlessness of orthopedy, it was no wonder that surgery awakened to a new life by antisepticism, seized all problems in orthopedy and disposed of all misformations and crookedness in a bloody way. The principle of this therapeutics was bone resection. So and so much of every bone or part of a bone through whose change of place and shape the deformity depended was extirpated until the crookedness became straight. The principle of operating-orthopedy consisted also of this, to fit the skeleton, that is the bones, to the shortened soft parts. Without doubt, the results reached in this way were remarkable. But important objections may be made to these results; through bone-resetting a deformity may indeed be straightway corrected, but the straightened limb remains crippled, notwithstanding, since the formative groundwork, the skeleton, has become crippled. Such a limb remains shortened, much less adapted to its function. A club-foot, for example, which has been treated with bone-resecting may be battered partly in its form, but it remains, nevertheless, still a crippled foot, since through the operation it has been shortened, since its joints have become in part destroyed, since its mobility has been lost, so that it can no more lift itself up and perambulate in normal manner on the floor. Let this example serve for many others.

A second objection to the bloody operation in orthopedic surgery is based on the accompanying dangers which are not

less by single operations than are the dangers of the most difficult invasions in abdominal surgery.

We know very well how to meet the dangers, but our certainty never can be absolute, for our measures of precaution always remain incomplete, as in everything human. *"Errare humanum est"*—"It is human to err!"

One should never forget that the orthopedic operations are not demanded as life-saving measures. The operations are not an absolute necessity, the deformity would not hurt life and the patients can reach an advanced age even with their infirmities. The life of the patient, therefore, should never be endangered by an orthopedic operation.

THE JUSTIFICATION OF BLOODLESS METHODS.

From the previously-stated reasons, the endeavor, by the introduction of new and successful methods, to make bloodless orthopedy capable of competing with bloody surgery seems to me to be justified. That bloodless procedure can be successful has been proven for hundreds of years by the crippled feet of noble Chinese women as well as the skulls of South American tribes, modeled to desired forms. But the Chinese method of crippling the foot requires years of care and pains.

In order to be capable of competing with bloody surgery, a bloodless method must give at least as quick and as sure results as the bloody method. If the bloodless method unites the swiftness of the result, with absolute lack of danger, it can become superior to the bloody method.

The foundation of success of bloodless orthopedic knowledge won by experience of the extraordinary plasticity of human tissues, especially the tenderness of it in youth. One can, therefore, characterize bloodless orthopedy as plastic bloodless surgery.

THE MECHANICS OF BLOODLESS ORTHOPEDY.

The essence of plastic bloodless surgery is the extremest conservatism; it forms the strongest opposition to surgery by extirpation and resecting; it takes away nothing from the body, it merely gives the individual parts of it another form. This transformation does not take place through mutilation of the skeleton, or through fitting of the skeleton to the soft parts. Bloodless plastic surgery, on the contrary, opens an entirely opposite way, it regards the bone as somewhat invulnerable and fits the shortened soft parts to the unchanged and unshortened length of the bone.

This fitting on of the soft parts occurs by means of the gradual stretching by manual or instrumental force, exactly regulated as desired, in extreme cases through the subcutaneous tearing of the shortened soft parts. Plastic, bloodless surgery, therefore, regards the youthful tissue as plastic clay, which to a certain extent it remodels in new forms.

The creation of new forms can obviously follow only in the natural way of joint-movement. This way is more or less closed by the crookednesses of the human body, since the bones have been deformed and the mechanism of movement has been destroyed, and since the shortened and shriveled soft parts hinder this movement. The chief problem of plastic bloodless surgery is, according to this, to stretch the shortened soft parts in a bloodless manner until they have the normal length, and to lead back the pathologic joints to postures best adapted for their function.

The direct effect of plastic bloodless surgery is limited to the soft parts. The bones have retained their abnormal form, and have simply been brought into changed relations one to the other. The plastic remodeling of pathologic bone forms into normal forms or those approximating to that which is normal is left to Nature. Nature does not do this voluntarily, but must be compelled to do so. The second, and quite as important, task of plastic bloodless surgery is to create this compulsion.

One means only exists by which Nature can be forced to lead back an abnormally-formed bone to a normal or nearly normal form, and this magic means is "the function of the bone as a carrier." The entire problem of plastic bloodless surgery, therefore, is to transform in a bloodless manner crooked limbs into normal postures, that the same (in this normal position) may be subject to function-rendering. Two simple examples may explain what I mean.

CLUB-FOOT AS AN EXAMPLE.

Look at the congenital club-foot. You can easily construct the picture of such a club-foot if you think of a normal foot rolled up to a spiral, so that the sole of the foot is turned in and the back is turned out. The problem therein consists of unrolling this spiral without disturbing the integrity of the skeleton. As I mentioned already, the resecting of bones is a very barbarous and maiming means, which would not be an unrolling, but a dismemberment of the spiral. The unrolling follows very lightly through the so-called modeling redressment, which either with manual, or in the case of older children, with machine power, stretching out all the shortened soft parts until the spiral becomes unrolled and the deformed bones can be brought into a normal position to each other. If a foot unrolled in such a way be held in its normal position and weighted down with the weight of the body, then Nature, through the law of the *functionelle anpassung*, discovered by J. Wolff, takes care of the restoration of the normal forms, and the club-foot remains permanently healed. The patient himself, so to speak, has trod his foot into the normal form.

CONGENITAL HIP DISLOCATION.

Another classical example for the bloodless plastic surgery is the congenital dislocation of the hip-joint. The problem here is the same in fundamental principles as that of the club-foot. The bones of the hip-joints must first be brought into proper opposition, be held in this position and in this position become subject to the function of weighted carrying.

The bloody opening of the joint pointed out the way to solve the problem of setting the dislocated joint in a bloodless manner. Through the preservation of this reposition and by means of the burden of the weight of the body on the head of the thigh placed in the insufficiently-developed socket, the possibility is given for the socket to deepen itself, and to a certain extent to grow about the head, so that finally it gains the power to retain it permanently.

Should it not be possible to fit the head in the normal place, it can, under the influence of function form a substitute socket, near the normal socket place, and while no ideal healing will be reached in such a case, there will, nevertheless, be a remarkable functional improvement.

Particularly in the treatment of the congenital hip dislocation, plastic bloodless surgery has to boast of its greatest and everywhere recognized results. In the case of the bilateral dislocation, this result is for the laity also a convincing one, especially if it sees the profile of such a child before and after the successful treatment. The completely-deformed body, with its ape-like habit and the ugly, protruding posterior and the prominent belly and the very ugly zigzag attitude has been restored as through a wonder to that normal and beautiful form which blooms, according to our German poets, on Olympus.

A BROAD FIELD FOR BLOODLESS METHODS.

In the two examples mentioned above, bloodless plastic surgery has substituted, for two really dangerous and threatening operations, means that are harmless and bode no danger. The same thing is the case with the wry-neck, a deformity which, if it be treated timely, that is, in childhood, in nowise demands any mutilating resecting of the muscles, but, on the other hand, may be surely and quickly healed in an entirely bloodless manner.

A broad field opens itself for plastic bloodless surgery in the treatment of the angular deformity of the joints. Only in the case of complete bony ankylosis bloody separation of the bones is indispensable. At least 95 per cent. of all the angular deformities of joints are not bony but fibrous, and, therefore, subject to the bloodless plastic surgery. Here the question is one of rapid rectification by means of the modeling redressment and the consolidation of the newly-created relations through the weighting-down function. Grave bloody operations may, in this manner, be avoided. Many problems of orthopedic surgery have not yet been solved by means of the plastic bloodless method. For example, the healing of lateral curvature of the spine is still an open question. Certain it is, that this cure can never be reached by means of operations. If it be at all possible to cure lateral curvature it will be effected in a

bloodless manner and by bloodless methods, which are analogous to the customary methods of plastic bloodless surgery. The lateral curvature of the spine will be overcorrected, and in the overcorrected position be subject to the function of weight-bearing. Until the present time, there has been wanting only the technical skill to carry out this plan. I can not here go into the subject, but I also claim that in the local treatment of tubercular joint diseases in children the bloodless conservative method in all cases shows better final results than the bloody method of treatment by resection. It is a principle of my bloodless treatment to restrain the function only so long as it is painful, that is, for so short a time as possible.

At the end of these detailed statements I should add that general surgery works very often with bloodless means. I recall simply the bloodless treatment of strictures and bone fractures and dislocations which has been a prevalent one for generations.

THE TREATMENTS OF FRACTURES.

In modern times, operative surgery has tried, with little success, to usurp the therapeutics of fractures. When the Röntgen rays taught that it is seldom possible to fit exactly the fractures of bones together one on the other, some surgeons proposed to lay bare every fracture, to fit the broken surfaces exactly together, and then to fasten them by means of nailing. Entirely apart from the wanton danger, called down by this procedure, the functional results throughout were not encouraging. The healing was of long duration; the patients succeeded in getting the use of their limbs later than with the old treatment, which, according to general experience, still had in great part quite satisfactory functional results, even if the anatomic results still left something to be wished for.

AMBULANT FRACTURE CASES.

Certainly the old bloodless treatment had great defects; the greatest and grossest of these shortcomings consisted in the exceedingly long exclusion of the broken limb from every function. Fortunately a reaction is under way against this method. I believe that the total omission of fixation of a fracture and simple massage treatment went too far and shot over the goal. The correct means will be to limit the fixation to the absolutely necessary minimum, and to prepare by massage for the taking up again of the functions. My maxim is to fit the bones well to each other, to fix them very exactly, and for the rest, to treat the fractures by the ambulant method, that is, to allow the patient to go about after a few days. Through the irritation of the function, the healing follows much quicker and surer than by absolute rest. I have had the experience that children who, from whatever reason, had broken the thigh or leg bone, could by suitable fixation of the limb walk about without pain as early as three or four days afterward. It is then my principle to restore as soon as possible the function of the broken bones in order to make use of this function of irritation for quick and sure healing. The care of the soft parts is a matter of secondary importance.

CONCLUSION.

The question is at hand whether the bloodless method can have any kind of a future in general surgery. No one knows. Impossible, however, it is not. At all events everyone filled with the spirit of humanity must wish heartily for it.

At the present time hundreds of wise men of all nations are studying the question whether the cancer, this most terrible scourge of mankind, is of parasitic origin or not. If the cancer is of parasitic origin, as one must hope, and as many of the most respected surgeons believe, then it may be possible that a curing antitoxin will be found. Then the prophesy of the great Joseph Lister, spoken as he gave his fellow beings antisepsis, will be appropriate for the second time: "Surgery will be quite different from what it has been heretofore."

If this boon should come to mankind, then, general surgery also will give way to a very little sharp but harmless instrument—the hypodermatic syringe.

May the twentieth century give to the world, burdened with pain and death, this savior of mankind. The nation which gives birth to this genius will become the first nation of the world through this one deed!

Clinical Report.

REMOVAL OF A SHOE BUTTON FROM THE NASAL PASSAGE.

H. M. CHILDRESS, M.D.
PADUCAH, KY.

In October I was called to see Eva, aged 6 years, who apparently had a severe case of postnasal catarrh. The general health was good. The history of the case is as follows: The first appearance of any trouble in the nasal passage was noticed four years ago. The symptoms at first were mild, but after a year they grew worse, and a slight cold caused the right nasal passage to close up and the right side of the face to become swollen and painful. The trouble finally extended to the right ear, and there was more or less suppuration, with very offensive odor, through the external ear. A physician treated her for catarrh for about three years. I learned that the treatment consisted mainly in spraying the nose with carbolized solutions and the application of various ointments.

I found no marked hypertrophied conditions, which led me to believe the passage was obstructed by a foreign body, and my diagnosis was confirmed when I removed from her nose a shoe button, located between the inferior and middle turbinated bodies, which had by some means gotten into the pas sage and remained there for a period of four years and had escaped detection. The button was of the ordinary rubber-like composition, and when removed was rough with depressions and abrasions. The wire eyelet crumbled on attempting to pick it up; the rubber composition, however, was still firm and retained its original shape and was perfect except as to the rough depressions. The patient recovered.

Germany's Latest Sanatorium, the Beelitz.—The success of the recent Tuberculosis Conference lay in what was seen rather than what was heard, and the great sanatorium at Beelitz was one of the most interesting sights. It has been recently constructed by the sickness insurance system "Landesversicherungsanstalten," for working people. It is about an hour's ride from Berlin, in the midst of pine groves, and is divided by roads into four parts, completely separating the sexes, and with one quarter devoted to tuberculous subjects who are thus isolated from the other inmates. The aim is always the restoration of the ability to earn a livelihood. The institution is at present arranged for 600 beds. There is a central heating and lighting plant, and the steam is forced through underground pipes to the various buildings. Each bedroom contains two to five beds, but the bathing and washing is in separate lavatories with special arrangements for rinsing the mouth. The inmates are trained especially to extreme cleanliness and care of the mouth. There is no luxury, but all is on the principle that the best is the cheapest in the end, and conveys the impression of luxury. The buildings are constructed with a view to the maximum of light and air. The entire institution is an object lesson of the benefits to be derived from the insurance legislation in Germany and the far-sighted policy of the insurance societies which are spanning the country with a network of sanatoria, as a matter of business.

Ross Combats Malaria in Egypt.—The Suez Canal Company asked to have Dr. Ross sent out to suggest measures to combat malaria at Suez. The local physicians had been studying the cause why mosquitoes were so prevalent in that arid country, although there seems to be no stagnant water for them to hatch in. They found that although the surface is dry, yet there is moisture close to the surface in many places, forming concealed marshes, revealed only by occasional tufts of grass. They found the anopheles at these points, and Ross has already instituted measures for their destruction on the lines that have been so successful in Western Africa.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 Dearborn Avenue :: :: Chicago, Ill.

Cable Address: "Medic, Chicago"

Subscription price: Five dollars per annum in advance

SATURDAY, JANUARY 10, 1903.

WHEN AND HOW PHYSICIANS DIE.

During 1902 the deaths of 1,400 regular practitioners of the United States were noticed in THE JOURNAL. This is probably within 5 per cent. of the total mortality in the profession of the country, as our facilities for obtaining notices of deaths are very complete. The total number of physicians in the United States is probably about 105,000, and the number of regular practitioners about 95,000. Consequently, the death rate for the year was about 14.74 per 1,000, a lower rate than is usually supposed to obtain in the profession. The statistics of life insurance companies claim a mortality rate per thousand among physicians of 7 at the age of 25; 15 at the age of 35; 21 at the age of 45; 34 at the age of 55, and 112 at the age of 65. The statistics of the United States Census of 1900 show figures which closely parallel our findings. While the details at our command are not sufficiently minute to enable us to make exact deductions, as they were usually derived from lay sources, still an analysis of the recorded cases presents a number of points of interest as regards causation, age at death and length of practice.

Of the 1,400 deaths recorded, in 616, or 44.7 per cent., no cause of death was given, or the cause alleged was so manifestly incorrect or incomplete as to be valueless. The principal causes of death were heart disease, 111; pneumonia, 107; paralysis, 63; tuberculosis, 61; accident, 60; nephritis, 47; typhoid fever, 45; apoplexy, 42; malignant disease, 31; appendicitis, 25; septicemia, 25; suicide, 23, and homicide, 13. Of these causes "heart disease" probably includes a number of cases of so-called heart failure; under "paralysis" are probably classed various nervous diseases terminating in that condition, and "apoplexy" may take in several causative conditions.

In 328 instances, or 23.4 per cent., the ages of the decedents were not given. The extreme limits of age were 21 and 96. Between the ages of 21 and 30, 67 deaths occurred; between 31 and 40, 137; between 41 and 50, 159; between 51 and 60, 173; between 61 and 70, 212; between 71 and 80, 220; between 81 and 90, 94, and 6 deaths occurred in individuals above 90.

The age of greatest mortality was 75, with 30 deaths; then followed 70 and 78 with 29 each; 80, with 28; 64, with 27; 63, with 26, and 35 with 25 deaths. The minimum of deaths, one, occurred at the ages of 21, 91, 93, 94 and 96. A graphic curve representing the deaths of the year in numbers by decades would show a rapid rise to 35, a slight rise thence to 65, a very slight increase from 65 to 75, the maximum. Thence there is a rapid drop, the minimum being reached at 95. A similar graphic curve based on the statistics of deaths of physicians in the United States Census, shows distinct parallelism, but the curve of the mean annual death rate of England and Wales for 1881-1890 rises symmetrically, reaching its maximum at 75. The mean average age of deaths among American physicians in 1902 was 58 years, 7 months and 29 days.

The number of years during which the decedents had practiced also varies within wide limits. In the case of 108, or 7.7 per cent., it was impossible to determine the duration of practice. The recorded limits varied between the year of graduation and 70 years, each with two deaths. In the first decade of practice 219 died; in the second, 246; in the third, 229; in the fourth, 235; in the fifth, 199; in the sixth, 143, and in the seventh, 21. The average duration of practice was 28 years, 10 months and 28 days. The greatest number of recorded deaths was 40 in the twentieth year of practice; 32 in the fifth and twenty-fourth years; 31 in the tenth, thirty-fifth and forty-second years; 30 in the fourteenth year and 29 in the sixth, twelfth and thirty-sixth years. A graphic representation of the length of practice would show a rise in the first and second decades; a slight decline in the third decade, and a slight rise in the fourth, followed by a sudden and progressively increasing angle of decline.

So far as these necessarily incomplete statistics go, they show that physicians lead a relatively sanitary life and that they practice what they preach.

THE CELLS IN INFLAMMATORY PROLIFERATIONS OF CONNECTIVE TISSUE.

The nature and fate of the cells in areas of inflammatory proliferation have been the subject of investigation and discussion among pathologic histologists since the very beginning of cellular pathology. To the student this part of the histology of inflammation no doubt is the reason of much perplexity because of the large number of different kinds of cells that he must learn to recognize and trace to their proper source. For a generation or more it has been taught that the polymorphonuclear leucocytes that migrate from the blood vessels in inflammations do not undergo any further development nor take part actively in the formation of new tissue from which they disappear. The mononuclear forms, or lymphocytes, on the other hand, have continued to offer great obstacles to satisfactory and unanimous agreement as to their exact rôle, especially as regards the formation of new tissue, because of the difficulty in distinguishing between these cells and more or less similar cells derived from the connective tissue or fixed cells, and endowed while young with the powers of locomotion. For a long time the general tendency was to deny all other cells than derivatives of connective

tissue cells the power actively to form new tissue; the more conservative would say that such power had not yet been demonstrated in the case of any white blood corpuscles. The gradual development of improvements and refinements in tinctorial methods and histologic technic in general soon led to renewed, more accurate morphologic study of the cells in question, with the result that special forms were recognized, such as the plasma cell, which hitherto had not been sufficiently well described. Observations were soon made that indicated that the question as to the rôle of the various lymphocytic cells in inflammatory foci was by far not so simple as just indicated. The results of an elaborate reinvestigation of these problems by means of the most improved and elaborate technic have been published recently by Maximow[1] from Ziegler's laboratory. Glass chambers and celloidin tubes were introduced into the subcutaneous tissue of various animals, and the immigrating and other cells studied both fresh on the warm stage and also in fixed preparations. He divides the different cells that enter into consideration into three large groups, the polymorphonuclear leucocytes, the fibroblasts and the polyblasts.

The polymorphonuclear leucocytes are shown once more not to form new tissue. The fibroblasts are derivatives of the fixed connective tissue cells; they are generally long and branched and contain clear nuclei with nucleoli; only occasionally do they become rounded and more like polyblasts. In the formation of connective tissue fibrillæ are described as originating in the superficial parts of these cells.

The polyblasts—the most interesting group because most complicated—are the mononuclear cells of various sizes, heretofore described as lymphocytes, mononuclear leucocytes, plasma cells, and, in the case of larger forms, as epithelioid cells. The majority are traced to mononuclear cells in the blood, but a small part seem to come from wandering cells present in the subcutaneous tissue (rabbits) and from cells in the adventitia of blood vessels, cells that in both cases probably belong to the same form as the lymphocytes of the blood.

The polyblasts are called so because they develop into the most varied cell forms. The lymphocytes from the blood are shown to develop or possess ameboid movements and to constitute a large part of the most important phagocytes, the macrophages, which before have been regarded mostly as fibroblasts. The nuclei and centrosomes are often peculiar, while in many the peripheral parts of the cell body may stain intensely with methylene blue (plasma cells). Maximow believes that this condition corresponds to special functional states in the various cells and that they are not characteristic necessarily of any particular form of cell. The polyblasts do not seem able to form connective tissue fibrils, but they may remain permanently in the tissue as an integral part of it; again, others constitute granular and non-granular cells in the vascular adventitia.

Without going into further interesting details of the varied morphology discussed by Maximow, enough has probably been said to show that the lymphocytes and their derivatives—polyblasts—appear to be entitled to more importance in the inflammatory process than so far given them. They are ameboid and phagocytic, forming a large part of the so-called macrophages. While they do not seem to form connective tissue in the sense that they give origin to fibrils, yet they may remain as permanent but distinct parts of the new tissue. In this sense we may speak of them as hematogenous tissue builders. There is, therefore, much that is new in Maximow's conclusions, and if verified in their more essential points they will mark an important advance in our knowledge of the cellular changes in inflammatory proliferations.

1 Ziegler's Beitr., Supplementheft v, 1902.

ABOLISH THE CORONER'S OFFICE.

The New York County Medical Association has prepared a legislative bill for abolishing the coroner's office in the state of New York. The measure is modeled largely after the Massachusetts law, and among other things it provides for medical examiners who shall furnish accurate and complete information concerning suspicious deaths. The police department or prosecuting attorney is given power to carry the legal investigation of suspicious cases before a magistrate.

It is, indeed, most desirable that this relic of ancient English jurisprudence known as the coroner's office be abolished, and the sooner the better. A more cumbersome, irresponsible, and on the whole useless piece of governmental machinery does not exist than the coroner's office of this country, especially as it appears in our larger cities where the demands for the kind of work it is supposed to do are greatest. In many states the office is a constitutional one, which will make the efforts for its abolishment in those states more difficult. In the matter of practical forensic medicine the United States is far behind other civilized countries because of the failure of the coroner's office to develop and adapt itself to the needs of the modern community. The proper carrying out of the important and highly responsible work naturally expected of the office that the present coroner's office stands for demands well-equipped laboratories for pathologic and toxicologic work manned by trained scientists. Medicolegal institutes of this kind exist elsewhere than in this country. Here this work is given into the hands of untrained men to do in the most unfavorable places, without facilities of any sort and with such apparatus as may be carried in a hand-bag. Corresponding to this shameful state of practical forensic medicine in this country, we find that the subject is neglected in most of the medical schools or given but perfunctory attention in order to fulfill the requirement of some states that instruction be given

in medical jurisprudence. Adequately equipped laboratories for teaching those who desire it the special essentials of forensic medicine do not exist here. The vast amount of suitable medicolegal material daily furnished by our large cities—the medical centers—is unused for instruction of students or for any scientific purpose. There exists but little scientific periodic literature in this important branch of medicine in this country. No doubt this neglected state of affairs is in turn responsible for the numerous and wonderful "battles of experts" that so often disgrace our court proceedings. It is no wonder that justice is heard to have miscarried because of imperfect and incompetent investigations by medical men from the coroner's office.

In the efforts to rehabilitate in adequate form this part of the legal machinery it is the duty of the medical profession to see to it that the steps taken are commensurate with the importance of the object it is sought to accomplish. The state should be asked to furnish not merely competent, trained men, but also properly equipped places for them in which they may do their work. In other words, it is time that special institutes, or medicolegal laboratories, be established in our large cities. Provision must be made, too, for improvements in the methods and facilities for teaching forensic medicine; special laboratory courses should be introduced wherever the material is available and the conditions warrant it.

UNSATISFACTORY REFERENCES BY ANTIVIVISECTIONISTS.

One is impressed, on reading Senator Gallinger's reply to Dr. Keen's letter as published in the newspapers, of the necessity of following Virchow's advice and verifying one's references. From internal evidence it would appear that the honorable Senator paid too little attention to the correctness of his citings and that probably he relied on a defective memory or on a very poorly informed informant. It is not very difficult to find cases of abuse of vivisection, but they no more warrant its prohibition or its restriction to the extent desired by the zoophiles than do the intemperate utterances of the antivivisectionists warrant their extermination. We could furnish him with cases of abuse which have been condemned in our columns, but it would be a great misfortune to mankind if its suffering and death were estimated as not worth some animal sacrifices. Even the beasts would suffer if vivisection were restricted, for veterinary medicine depends as much on animal experimentation as does human healing and more.

It is not our purpose, however, to review Senator Gallinger's arguments or statements, but to ask for better information as to some of the names he quotes. We can understand "Saranelli," but unless the types have done him injustice we might suspect Senator Gallinger of having only a very general and imperfect knowledge of a man whose name he thus misspells. But who are Drs. Pyle of Ohio and B. A. Watson of Jersey City? Dr. W. S. Halstead of New York is also unknown to us, though we have heard of Dr. W. S. Halsted of Baltimore, and do not recall just what in his record is referred to. The only Dr. B. A. Watson in Polk's Directory for 1902 hails from a small Missouri city, and the only Drs. Pyle in Ohio from Toledo and Oberlin. Their records as vivisectionists are unknown to us. Professor Slosson of Wyoming is apparently not a physician, and we admit unfamiliarity with his work. These are points in Senator Gallinger's letter that discredit it to a certain extent. We doubt whether Dr. Keen or any one else is as familiar with alleged instances and authorities, as quoted by the Senator, as the latter would seem to suppose.

In this connection it may be well to say that a Mrs. R. P. White, in a communication to the newspapers, called out by the first letter of Professor Keen to Senator Gallinger, quoted Sir Frederick Treves as an opponent to vivisection. We took the trouble to send the clipping to Sir Frederick and received in reply a statement from which we quote:

> My solitary utterance on the subject of vivisection is contained in an address delivered at Birmingham, in October, 1898 (*Lancet*, Nov. 5, 1898). Speaking of the suturing of intestine, I said that I had found that operations on the intestines of dogs were useless as a means of fitting the surgeon for operations on the human bowel.
>
> Those who are familiar with the controversial methods of the antivivisection party will not be surprised that certain of my remarks have been cunningly isolated from the context and have been used in advertisements, pamphlets and speeches to condemn all vivisection experiments as useless. . . . . No one is more keenly aware than I am of the great benefits conferred on suffering humanity by certain researches carried out by means of vivisection.

This is only one of many misrepresentations of the antivivisectionists, and even after their attention has been called to the misrepresentation, they still keep on.

MEDICAL MEMBER OF THE CANAL COMMISSION.

The New York Academy of Medicine recently adopted resolutions[1] suggesting that, as the health of the workmen engaged on the Panama Canal was in the past the most serious problem in its construction, one of the members of the commission, which the President is authorized to appoint to control the affairs of the proposed canal, should be a medical man. It is further suggested that the amplest powers should be given the medical officers in charge of the sanitation of the canal. These resolutions can only meet with the hearty approval of the medical profession and can scarcely fail of the approbation of any one who realizes how much has been accomplished for the health of Cuba as the result of the proper maintenance of sanitation by the

1. THE JOURNAL A. M. A., January 3, p. 41.

fortunate presence of a medical governor general. The death rate of Havana when the United States handed the government of the island over to the Cubans was scarcely more than one-third what it had been during Spanish rule before the war. The city had actually been converted from a known hot-bed of disease, dangerous for all visitors, into a rather salubrious semi-tropical port, even healthier than many of our larger cities on the American mainland.

Yellow fever and malaria are the most serious of the diseases that threaten the workmen at Panama and practically constitute the main reasons why temperate white workmen should find the tropics dangerous to health. Yet the experience in Cuba and elsewhere shows that these are preventable. Capps[2] has called attention to the need of medical supervision for prophylaxis against uncinariasis, which also may otherwise prove the source of not a small mortality. It would seem that the United States government has one of the greatest opportunities ever offered to demonstrate how much modern sanitary regulations can accomplish for health under presumedly unfavorable circumstances. It would indeed be a matter for pardonable national pride if we could accomplish the constructions at Panama without the terrible loss of life hitherto considered inevitable because of the climatic and pathogenic conditions.

On the other hand, it would be a lasting disgrace if a popular government should neglect any possible precaution to save lives in the work. By all means let us have a medical member of the commission, to whom shall be entrusted, with full powers, all the sanitary aspects of this important problem. If the magnificent work of the governor general of Cuba during our occupation is to be any earnest of the ability of medical men to fulfill executive duties of the very highest order in an exemplary manner, then indeed there is not only ample justification, but even obvious advisability to try further experiments in the employment of members of the medical profession in responsible administrative positions, especially where great sanitary problems are involved.

THE WELTMER DECISION.

The abstract of the recent decision of the U. S. Supreme Court that appears on p. 122, and which we noticed editorially November 29, emphasizes the fact that in the case as presented to the court the averments of the complainant as regards the material facts were admitted in the demurrer, and that the court did not have presented to it the evidence of fraud which is so clear to us as physicians and which was the cause of the postmaster's action. That being the case, it may be that the decision is not criticisable by us, though we still think that some of it is liable to a rather unfortunate construction in some regards. It is hoped that nothing in the decision will rule out the proper presentation of the evidence when the case is reheard and a complete showing up of the fraudulent practice which lead to the original refusal of the privileges of the mails.

2. THE JOURNAL A. M. A., January 3, p. 28.

DANGEROUS SELF-DRUGGING.

As an illustration of one of the popular types of self-drugging, we notice an item which has been going the rounds of the papers for some time, ostensibly coming from a physician's communication in a medical journal, which advises the use of equal parts of peppermint water and spirits of chloroform as a remedy for sleeplessness. Of course, advice is often given in medical journals not intended for the public. The consequences of the general use of spirits of chloroform by the public whenever they can not go to sleep would not be altogether satisfactory to contemplate, and though the physician would probably have to be called in, there might be cases where the outcome might be disappointing. Nothing is said about the dose in the newspaper items, therefore the victims, for that is what we may call them, would have a chance to do themselves up in the most approved fashion. Other items of this kind are extant—this is only one of many—but now and then it is worth while to notice them.

Medical News.

CALIFORNIA.

Personal.—Dr. W. Francis B. Wakefield, Oakland, has returned from a trip abroad.——Dr. Robert F. Rooney, Auburn, fell a few days ago, breaking a bone in his ankle.——Dr. Jose de S. Bettencourt, San Francisco, has returned from eight months' study in Vienna.——Dr. Luther S. Rogers, Tehachapi, celebrated his twenty-fifth wedding anniversary Dec. 27, 1902.

Would Bar Out Consumptives.—The special committee on tuberculosis appointed at the last session of the legislature has decided against the proposition for the establishment of a state hospital for the care of tuberculous patients. It also decided to recommend in its report to the legislature, the adoption and rigid enforcement of more stringent laws governing the admission to California of persons afflicted with tuberculosis.

San Francisco Mortality for November.—The statistician of the board of health reports the total number of deaths during November was 579, equal to a death rate of 19.29 per 1,000 per annum, as against 564 for November, 1901, when the rate was 18.79. During the week ended November 29 there were 165 deaths registered, which is greatly in excess of the normal rate for similar periods in past years. The principal causes of death were: Diphtheria, 14; typhoid fever, 14; cancer, 35; tuberculosis, 77; cerebral apoplexy, 21; diseases of brain 17, of heart 69, of respiratory system (including pneumonia) 57, of digestive system 39; Bright's disease, 25; accident, 50; homicide, 3; suicide, 14.

ILLINOIS.

Bequest to Hospital.—By the will of Mrs. Isabella D. Harwood, Champaign, $2,000 is devised to the Julia F. Burnham Hospital in that city.

The Detention Hospital.—The number of patients admitted to the Cook County Detention Hospital during 1902 was 1,503, the same as for 1901. Of these 899 were men and 604 women; 613 were sent to the Cook County Hospital for the Insane; 248 to the Illinois Northern Hospital at Elgin; 242 to the Illinois Eastern Hospital at Kankakee, and 275 were discharged.

State Board of Health Recommendations.—The biennial report of the State Board of Health recommends that the legislature establish a state home for consumptives; that a state board of medical examiners be created, which shall conduct examinations made under the present law by the State Board of Health. Other recommendations are for better laws to enable the board to suppress contagious disease and safeguard the public health.

Cook County's Sick.—In the year 1902, the County Hospital admitted 19,728 patients, or 1,287 less than for 1901.

More than 1,600 major operations were performed. In August 915 patients were under treatment, or nearly 300 more than the average for that month. This was due to the increase in typhoid fever. More than 900 cases of this disease were treated during the year, with 97 deaths. The aggregate of deaths for the year was 1419, or nearly 7.2 per cent.

Chicago.

Hospital Sold for Debt.—St. Anthony's Hospital on Frankfort Street was sold, January 3, as a result of mechanic's lien proceedings.

Left Money for Hospitals.—By the will of Mrs. Rosa Buehler, $1,000 is bequeathed to the German Hospital and $500 to Uhlich's Lutheran Hospital.

Regulation of Hospitals.—Corporation Counsel Walker has given an opinion that the city has the right to regulate the location of hospitals which can be shown to be offensive or unwholesome. He holds, however, that the police power of the city does not permit it to prohibit hospitals generally as a class from any designated locality.

Lemon Juice and Germs.—The health department says:

Further laboratory study of the action of lemon juice on the typhoid germs confirms the results previously announced. The investigation has been extended to its action on the colon bacillus—first cousin of the typhoid and the cause of diarrheal and dysenteric diseases, which carry off many more victims every year than does typhoid fever at its worst. It is found that the juice from different specimens of fruit varies greatly in destructive power, and the proportion stated last week—one teaspoonful to half a glass of water—is none too much. The action of the acid is instantaneous.

Campaign Against Smallpox.—The commissioner of health, in his annual report, thus sums up the year's history regarding smallpox:

During 1902, 334 cases of smallpox were discovered in the city and removed to the isolation hospital, of which number 322 have been discharged recovered, 4 died, and 8 remain under treatment. The campaign against the disease was inaugurated in January and pushed by the active co-operation of the railway managements in 600,000 square miles of infected territory and among 25,000,000 people. At the time this campaign was begun there had been an increase of more than 900 per cent. in the number of smallpox cases in this territory over the number for the corresponding period of 1901, and 73 per cent. of all the cases in the United States were in the ten states surrounding Chicago. By the middle of October the United States Public Health Reports showed a reduction of 48 per cent. in Chicago territory, and an increase of 124 per cent. in the remainder of the country, in which no such campaign of education and instruction was pursued.

Deaths of the Week, Month and Year.—The abnormally high death rate of December, 1902, continued throughout the week ended January 3, and 628 deaths were reported, an annual death-rate of 17.36, an increase of 30 over the previous week and of 129 over the corresponding week of 1902. The bulletin of the health department says:

The causes showing the greatest increase are pneumonia, bronchitis, cancer, consumption, diseases of the heart and of the nervous system and the deaths from violence.

The December, 1902, deaths have materially raised the rank of the month in the relative mortality scale of the past twenty-two years. For the previous twenty-one years December had furnished an average of 7.9 per cent. of the total yearly mortality, and ranked fifth in lowest mortality. The 2,607 reported deaths last December form 9.8 per cent. of the total 26,455 deaths of the year, and the month now ranks eleventh in the scale, being exceeded only by the month of July, which furnishes 10.7 per cent. of the total mortality of the twenty-two years.

The year's deaths numbered 26,455, or 14.53 per 1,000 of population.

MARYLAND.

Smallpox.—Two cases of smallpox were reported near Emmorton, December 29.——The smallpox conditions on the Eastern Shore are reported by Dr. John S. Fulton, secretary of the State Board of Health, to be as follows: A new case was discovered at Berlin, January 3, in a girl 10 years old. Of the 20 smallpox cases at Snow Hill 13 have been discharged from the isolation house and the others are convalescent. There are 3 cases at Stockton.

Baltimore.

Health Department Banquet.—The annual banquet of the health department was held Dec. 30, 1902, the entire force being present under Dr. Bosley. Dr. William Royal Stokes was toastmaster, and speeches were made by Mayor Hayes, Drs. Bosley and Heiskell and others.

Fumigation Wagons.—The health department has added to its equipment two fumigation wagons. The fumigation of rooms and houses has grown to be one of the most important duties of the department. Heretofore the agents have traveled about with their fumigating machines on the street cars.

Smallpox in Baltimore.—For the first time in more than four months, a case of smallpox was discovered in Baltimore December 29. The patient, a tramp, said he had come from Ohio on a freight train. In less than an hour of his arrival he had been sent to quarantine, and by night every place where he had been had been visited by health officials, and all likely to have come in contact with him vaccinated.

Health Department Extension.—Plans are being matured for the erection of a number of buildings for the use of the health department on land adjoining Bayview Asylum. Among these will be an infectious diseases hospital and a hospital for consumptives. The latter is to be built entirely of iron and glass on the plan of a conservatory. The property to be utilized contains 150 acres. In connection with the infectious diseases institution the cottage plan will be used, each cottage being devoted to the treatment of a separate disease.

Mortality of the Year.—The report of Health Commissioner Bosley shows 10,253 deaths during 1902, as compared with 10,700 for 1900 and 10,479 for 1901. The annual death rate per 1,000 was 18.70, being for the whites alone 16.53, and for the colored 30.76. The death rate was one per cent. less than that of the two previous years. There were 3,327 deaths under 5 years, or 32.45 per cent. of the entire number. Among death causes pulmonary tuberculosis leads with 1,159; pneumonia has 1,010; heart diseases, 716; diarrhea and enteritis (under 5, 695; over 5, 82); Bright's disease, 659; cancer, 384; typhoid fever, 220; diphtheria, 99; whooping cough, 95; measles, 41; scarlet fever, 37, and smallpox, 7.

Insane Hospital Report.—The one hundred and fifth annual report of the Maryland Hospital for the Insane No. 1, at Spring Grove, shows a net cost of maintaining the institution during the past year of $104,800, the expense per capita being $190.45. At the beginning of the year, Nov. 1, 1901, there were 530 patients, 286 males and 244 females, including 22 private patients. During the year 58 males and 55 females were admitted. The whole number under treatment was 643, 344 males and 299 females. During the year 44 were discharged, of whom 15 recovered, 12 were improved, and 17 unimproved. There were 47 deaths. Of causes, heredity was the potent factor in 25 per cent. of all cases, intemperance and old age following in the order named in males; while the most common exciting causes in females were "change of life," ill health and domestic trouble. Dr. Percy Wade, superintendent, recommends the erection of a special building for the criminal insane so as to prevent escapes.

MICHIGAN.

College to Move.—The officers of the Grand Rapids Medical College have decided to move the institution to a more central location.

Sanitarium Destroyed.—Fire on Dec. 13, 1902, destroyed the Reed City Sanitarium. The inmates were all removed in safety. The loss is about $45,000.

Left Estate to Hospital.—By the will of Dr. George L. Elliott, one of the pioneer dentists of Detroit, his entire estate, valued at $15,000, is bequeathed to the Children's Free Hospital.

"Mail Curers" Convicted.—Drs. James M. Peebles, Walter T. Bobo and Charles W. Green of the People's Institute of Health, Battle Creek, were convicted by a jury in the United States District Court, Dec. 22, 1902, of violating the postal laws. A thirty-day stay of proceedings was granted. It was charged that advertisements of their mental "cure" by mail for all sorts of ills constituted an attempt to obtain money by fraud. During the trial Dr. Bobo testified that he believed Dr. Peebles had a healing power like that of Jesus, only that the doctor's power was smaller. Dr. Bobo admitted that if a patient at a distance managed to procure Dr. Peebles' signed instructions and followed them faithfully the cure would not be effective if the patient had not paid the fee of $1.

MINNESOTA.

Smallpox at Hopkins.—County Physician Dr. Jonas M. Kistler visited Hopkins, Dec. 20, 1902, found 9 cases of small pox and quarantined two houses.

New Hospital at Brainerd.—The Order of St. Benedict has completed its $30,000 hospital at Brainerd, and the patients have been moved into it. The hospital is called St. Joseph's, and will be dedicated March 19.

Leprosy in Minnesota.—Dr. Henry M. Bracken, secretary of the State Board of Health, advocates a national home for

lepers. He says that 76 lepers have made their homes in Minnesota, of whom only 16 now live, each being isolated and cared for as well as may be under conditions of isolation.

Personal.—Dr. Willard C. Foster, Minneapolis, as the result of a competitive examination, has been appointed city physician of Manila.——Dr. Charles H. Norred, Minneapolis, has resumed active practice.——Dr. Reynaldo J. Fitzgerald, Minneapolis, who has been in bad health since his return from the Philippine Islands, is reported to have been seriously ill, but his ultimate recovery is confidently expected.

MISSOURI.

To Obviate Substitution.—The first examination for certificates to practice medicine under the new rules promulgated by the State Board of Health requiring that the application be accompanied by a photograph of the applicant, was held at Kansas City, Dec. 29, 30 and 31, 1902.

X-Ray Not Compulsory.—In the suit of an employe against his employer for $20,000 damages for injuries alleged to have been received while in the employment of the defendant, Judge Gibson, Kansas City, has ruled that a court has no right or power to compel a person to undergo an *x*-ray examination.

Registration of Consumptives.—An ordinance providing for the registration of the name, address, sex and age of persons suffering from tuberculosis, within the limits of Kansas City, and regulating said matter was introduced in the city council and referred to the sanitary, hospital, etc., committee.

State Failed to Establish Fact of Practice.—The action of the State Board of Health in summarily rejecting an applicant for license to practice medicine has been decided to be an infringement of constitutional rights, and in the case in question, that of the State vs. Dr. F. A. Starbuck of Kansas City, Mo. and Kansas City, Kan., Justice Fairweather has found the defendant not guilty.

NEW JERSEY.

Bequest to Hospital.—Patrick Flanagan, Perth Amboy, who died recently in St. Michael's Hospital, Newark, has bequeathed his entire estate, valued at $7,000, to that institution.

Isolation Hospital Site Chosen.—The committee appointed to select a site for an isolation hospital for the Oranges, has secured a tract of 13 acres of pasture and wood land on the top of the First Mountain in West Orange.

Settled Out of Court.—The case of Dr. John R. C. Thompson, Bridgeton, against the Township of Downe, Cumberland County, for services rendered a smallpox patient, has been settled for $1,500. Suit was brought for $2,000, and a jury gave a verdict of $2,100.

Tuberculosis Sanatorium Site Secured.—The commission appointed to secure a site for the tuberculosis sanatorium has secured 550 acres of land at Glen Gardner, Hunterdon County. The commission is having plans prepared for extensive building thereon, and asks for an appropriation of $300,000 to carry out the plans. The last legislature made an appropriation of $50,000.

New Jersey Epileptics.—The annual report of the board of managers of the State Village for Epileptics, states that there are more than 2,500 epileptics in the state. It shows that 85 patients have been received at the village at Skillman since it was opened, in 1898, and that of this number 9 have been discharged as cured; 4 have been transferred to other institutions; 4 have been removed by parents; 2 have died, and 3 have escaped. During the past year 25 male and 20 female patients have been admitted, making the total population at the present time 75.

Hospital Staffs.—The medical staff of Somerset Hospital, Somerville, has reorganized by electing Dr. John P. Hecht, president, and Dr. Aaron L. Stillwell, secretary.——St. Michael's Hospital, Newark, has elected Dr. Herman C. Bleyle attending physician, and Drs. George H. Balleray, Paterson, Edgar Holden, Peter V. P. Hewlett, Charles J. Kipp, Charles Young, Charles M. Zeh and James Elliott, Newark, on the consulting staff.——The German Hospital, Newark, medical staff, has elected Dr. William F. Seidler, president; Dr. Frederick Hexamer, secretary, and Dr. William J. Roeber, treasurer.

NEW YORK.

New York City.

Gouverneur Hospital.—That this hospital has had a busy year is shown by the statement that the four physicians of the house staff have attended 57,721 cases in the dispensary, over 35,000 of which were surgical.

The Bulkley Lectures.—Dr. L. Duncan Bulkley began his usual winter course of lectures on diseases of the skin, January 7, at 4:15 p. m. The lectures will be held thereafter on every Wednesday afternoon in the out-patient hall of the New York Skin and Cancer Hospital, at the same hour, and are free to the medical profession.

Bellevue's New Superintendent.—Dr. William Mabon, formerly of Ogdensburg, took up his new duties as superintendent of Bellevue, Harlem, Fordham and Gouverneur hospitals January 1. After a tour of inspection of Bellevue, he expressed himself as well satisfied with the present state of affairs there, and disclaimed any intention of making any radical changes in organization or personnel.

Diet for City Institutions.—Commissioner of Charities Folks has found so much lack of variety in the dietaries of the institutions under his care that he has appointed, at a salary of $1,000 a year, Miss Florence R. Corbett, the present chief dietitian in the Kings County Hospital, as his assistant and adviser in the purchase, distribution and cooking of the food for the department. Miss Corbett is a graduate of the Kansas State Agricultural College.

"Million-Dollar Hospital" Wants Funds.—The Society of the Lying-in Hospital, better known as J. Pierpont Morgan's million-dollar hospital, has made an appeal to the public for funds for its maintenance. The hospital is intended to accommodate 186 persons, but at present only 62 beds are in use. The plea for help is based on the fact that all the other maternity hospitals of the city have a total of less than 600 beds, while the number of births in the Borough of Manhattan alone in the past year was 51,688, i. e., one child was born about every ten minutes.

Board of Coroners vs. Coroner's Physician Weston.—The Board of Coroners of the Borough of Manhattan have sought to try Dr. Albert T. Weston on various charges which they considered sufficient to warrant his removal, but he prevented such action by applying to the Supreme Court for a restraining writ. Justice Leventritt, of that court, has now decided that the Borough Board of Coroners, and not the whole city board, is competent to try Dr. Weston, and that the Manhattan board is right in its contention that Dr. Weston is not legally in the employ of the city, his term of office having terminated with that of the coroner who originally appointed him.

The New Hospital for Consumptives.—Allusion has already been made in these columns to the movement now on foot, under the auspices of the Charity Organization Society's Committee on the Prevention of Tuberculosis, for the establishment without the city limits of a new hospital for consumptives. It is estimated that, including the general hospitals, homes and sanatoria receiving tuberculous patients, there are accommodations in New York City for only about 1,000 consumptives. It has been estimated that one-eighth of all the deaths in the city are due to phthisis, and in Greater New York, in 1901, there were 8,141 deaths from this disease, while 13,387 cases of tuberculosis were reported in that year. This shows the inadequacy of present accommodations. The committee now has under its care 64 poor tuberculous persons.

Vital Statistics for 1902.—The annual report of the board of health, which has just been made public, shows a gratifyingly low death rate, not only for the whole city, but for each of the boroughs. The death-rate of New York City for 1902 was 18.74 per 1,000, which is considerably lower than any previously reported for this city, thus: In 1898 it was 20.26; in 1899, 19.47; in 1900, 25.97, and in 1901, 20.02. The total number of deaths for 1902 was 68,082, as compared with 70,803 for 1901. The death rate for the old city, i. e., the boroughs of Manhattan and the Bronx, was 19.49 for 1902. The nearest approach to this in the past was in 1899, when the death rate was 19.81. A popular belief, which is shared in to some extent even by physicians, that measles is a trifling malady receives a severe setback in the statement in this report, that the epidemic of measles in the first four months of last year caused an increase in the number of deaths over the year 1901 for the same months of 1,100. There was a slight increase in the number of deaths from typhoid, but this was offset by a decrease of 100 deaths from smallpox. There were 4,907 more births and 2,653 more marriages reported than in 1901.

Buffalo.

New Emergency Hospital.—A new accident hospital, called the Riverside Accident Hospital, has been opened in the Fitch Institute building, and a ward of eight beds is now ready for the reception of patients.

New Quarantine Hospital.—The councilmen have at last, by a bare majority, approved the resolution of the aldermen directing the commissioner of public works to prepare plans and specifications for a new quarantine hospital on the site of the present one on East Ferry Street.

Tenement-House Owners Ignore Law.—Health Commissioner Greene has submitted to the district attorney the names and addresses of 26 owners of tenement houses who have ignored the health department's orders to remedy the sanitation or other unsafe conditions existing therein.

Relief for Hospitals.—The committee on charitable institutions of the board of supervisors has granted financial aid to the following hospitals and dispensaries: Buffalo Eye, Ear and Throat Hospital, $2,000; Buffalo Eye and Ear Infirmary, $2,200, and German Hospital Dispensary, $1,700.

Eye and Ear Infirmary Report.—The twenty-sixth annual report of the Buffalo Eye and Ear Infirmary shows that during the past year 2,363 new cases were treated; of these 1,675 had diseases of the eye, 336 diseases of the ear, 260 diseases of the nose and throat, and 92 diseases of the skin. The total number of patients admitted since the opening of the institution was 37,786.

Fumigation of Mails.—Health Commissioner Green has written to Dr. Lewis of the State Board of Health of New York and to Dr. C. O. Probst, of the State Board of Health of Ohio, recommending that they take advantage of their authority to direct cities in which smallpox exists to fumigate outgoing mails. There has been a case of smallpox in Buffalo directly attributable to the mails. It occurred in a local mail handler sorting Rochester mail. A mail clerk was also taken from the train at Syracuse, N. Y., suffering from smallpox.

PENNSYLVANIA.

Sued for Suicide of Husband.—Mrs. Minnie Kincaid has sued the borough of South Bethlehem for $20,000 for the death of her husband, who hanged himself while quarantined with smallpox.

Alleged Illegal Detention.—Drs. Frank C. Gundlach and William C. Ranson, Pittsburg, are defendants in a damage suit of $5,000 for alleged illegal detention of Mrs. Tina Jackson on the grounds of insanity. It is contended by the plaintiff that the physicians took only a few minutes in making the examination.

Personal.—Dr. C. E. Boon, Johnstown, has been elected smallpox physician at a maximum salary of $300 per month. ——Dr. William A. Shannon, Ellwood, charged with being a public nuisance, because he did not report a case of smallpox to the secretary of the local board of health, was acquitted, Dec. 13, 1902, the county paying costs of suit.

The Fight Against Tuberculosis.—The Pennsylvania Society for the Prevention of Tuberculosis plans to organize the whole state into a system with a society of many thousand members. The hospital at White Haven is to serve as a center, and it is the purpose to establish like institutions and also dispensaries throughout the state. As to the system here adopted—out-door life with forced feeding—Dr. Flick states that he saw no better results abroad. The Pennsylvania system is more economical; the indigent poor are treated; and provisions are also made for dying consumptives, whereas European institutions care only for incipient cases.

The Care of the Insane.—A commission was appointed at the last session of the legislature to inquire into the condition of the insane of Pennsylvania and to suggest remedial legislation. The commission has visited all the institutions of Pennsylvania and the principal ones in New York, Michigan and Wisconsin. It is understood that it will recommend that all the institutions for the care of the insane be placed under a board of control having the right to buy supplies, transfer patients—keeping those susceptible of improvement apart from the violent cases—and to exercise a general supervision in the construction of buildings and in the appointment of attendants.

Philadelphia.

Coroner's Inquests.—The coroner has held within the year 2,745 inquests. There were 196 cases of suicide. Of these 42 were gunshot wounds, 33 gas asphyxiations, 32 strangulations, and 31 by the carbolic acid route.

Munificent Bequests.—The account of the executors of the estate of John D. Lankenan, who was for many years president of the German Hospital and the Mary J. Drexel Home, was recently adjudicated. The balance on hand for distribution is $1,139,777. Of many charitable bequests there are two of $569,888 each to the German Hospital and to the Mary J. Drexel Home.——A site for the new almshouse and insane department of the Philadelphia Hospital has probably been chosen. This is a matter of great concern to the profession in Philadelphia, and of vital importance to the laity on account of the overcrowded and antiquated equipment. The site determined on for the almshouse and insane department is ground of the House of Correction property at Holmesburg, where the city owns 150 acres of high, healthy, accessible, unoccupied land. On December 28, at the invitation of Mayor Ashbridge and the officials of the Department of Charities and Correction, a number of prominent physicians of the city made a visit of inspection to the proposed site. Resolutions were afterward unanimously adopted endorsing this site. After the meeting it was understood that Mayor Ashbridge will transmit a message to councils recommending the passage of an ordinance permitting the Department of Charities and Correction to use the site selected, and to begin at once the construction of the necessary buildings. This plan will permit the enlargement of the Philadelphia Hospital on its present site.

GENERAL.

Want Panama Canal Physician.—The American Association for the Advancement of Science petitioned the President, January 2, that one member of the Isthmian Canal Commission should be a physician.

To Kill Hawaiian Mosquitoes.—A crusade with oil to kill mosquitoes is begun in a part of Honolulu. The lowland taro patches and swamps are an especial object of attack because of their standing water.

Hawaiian health reports for November showed that the unfavorable autumn weather caused in certain districts a large increase in influenza, pneumonia and dysentery. The general average of the reports made a favorable showing, however.

The Plague Conference.—In response to a request from nineteen states, Surgeon-General Walter Wyman has called a conference of the Public Health and Marine-Hospital Service with the health representatives of said states, to meet in Washington, D. C., January 19. This is the first conference called under the law of 1902 reorganizing the United States Marine-Hospital Service and providing for a conference of that service when requested officially by the health or quarantine officers of any five states. The principal object of this conference will be the consideration of bubonic plague now alleged to exist in some quarters of the United States and Mexico.

Estate of Major Walter Reed.—At a recent meeting of the New York Academy of Medicine, Dr. W. W. Keen, Philadelphia, said that he had been informed that the family of Major Surgeon Walter Reed had been left with only a very small pension for their support, and that President Gilman of the Carnegie Institute had suggested the propriety of the medical profession and the public generally raising for them a fund of $100,000. At the recent meeting in Washington of the American Association for the Advancement of Science, the medical and allied branches appointed a committee to collect a fund for Mrs. Reed.

CANADA.

Montreal General Hospital reports for December 241 patients admitted and 245 patients discharged; average daily sick in residence, 192; admissions to the outdoor departments, 2,556; deaths, 19.

New Wing for St. Michael's.—Two lots adjoining St. Michael's Hospital, Toronto, have been purchased, and the houses thereon will be remodeled and used as a maternity ward. Later a building will be put up. There are now 150 patients in this hospital, and patients have had to be turned away for lack of room.

Montreal Civic Hospital Problem.—The Montreal City Council has decided to give the Notre Dame Hospital and an English hospital each $15,000 a year for twenty-five years, if they will care for patients affected with contagious diseases. This hospital problem has been before the Montreal Council now for three years.

The Ontario death rate for 1902 from all causes is about that of 1901. For 1902, as compared with 1901, the figures are as follows: Diphtheria, 443—512; scarlet fever, 265—209; measles, 112—120; whooping cough, 145—112; typhoid fever, 332—345; tuberculosis, 2,205—2,286; other causes, 21,556—22,152. Totals, 25,058—25,736.

Smallpox Well in Hand in Ontario.—Dr. P. H. Bryce, secretary of the Ontario Board of Health, reports with the

close of 1902 that the smallpox outlook was much brighter than a year before. In December, 1901, 250 new cases were reported in the province while in December, 1902, but 86 were reported, and these were nearly all in two centers, one of which is now practically cleared up. During the whole year of 1902 there were in round numbers 2,500 cases, with 15 deaths. The year 1902 was the heaviest in this regard for a good many years. In 1901 there were 1,838 new cases and 7 deaths. In 1900 there were 11 deaths; in 1899, 7. Dr. Bryce was notified January 3 that smallpox had broken out at three points in Ontario, viz., Galt, in Waterloo County, Thamesville, in Kent County, and on the Deseronto Indian Reserve.

FOREIGN.

Antitoxin in Austria.—By order of the government of Austria, every drug store in that empire must keep diphtheria antitoxin on hand and sell it below cost.

Quarter Million for Hospital.—The London Hospital for Sick Children has received $240,000 from William Waldorf Astor to build a new out-patient department.

Laborde's Automatic Tongue Tractor.—A cable from Paris announces that Dr. J. V. Laborde has invented a mechanism to employ his resuscitation method by rhythmic traction on the tongue. It is electrically driven.

A typhoid serum was described, with reports of marked reduction of the death rate, at the International Medical Congress at Cairo. This will be reviewed in the Foreign Medical Literature department next week, title 55.

An international exposition of hygiene will be held at Buenos Ayres in April, 1904, in connection with the Second Latin-American Medical Congress. Several steamship companies have granted reduced rates for the transportation of exhibits.

Physicians on Mecca Pilgrimage.—The Egyptian government will have pilgrims from that country to Mecca go in a body with an escort of physicians to guard against the bringing back of the plague and to care for the health of the pilgrims on the trip.

Medical Honors for a Publisher.—The honorary degree of M. D. has been conferred by the university of Freiburg on the publisher, Gustav Fischer of Jena, who has brought out a large number of important medical books and collected works as well as medical periodicals.

The sleeping sickness, according to a report of the School of Tropical Medicine, London, is extending in Africa, and fears are expressed of its menacing Egypt. It has killed 25,000 people, chiefly in and about Uganda. It resembles meningitis and is almost invariably fatal.

Woman's Medical College at St. Petersburg.—Six years have elapsed since this college was established by the St. Petersburg authorities, and the first class to graduate has just received its diplomas. There were 111 members of the graduating class and the total number of students is now 1,314.

Argentine Antituberculosis Measures.—Instructions how to prevent the spread of tuberculosis have been printed on the match boxes used by a large match factory in the Argentine Republic. Our informant states that the pictures of the physicians most prominent in the crusade also adorn the boxes.

The "Vereinigung Alter Deutscher Studenten in America."—Our German exchanges welcome the birth of this new organization, of which Dr. Carl Beck of New York is the president. The aim is to promote closer intercourse and friendship between Germany and America in all matters pertaining to science, art and literature.

New Editors of Virchow's Archiv and Jahresbericht.—Professor Orth of Berlin assumes the publication of Virchow's *Archiv* henceforth, with Prof. O. Israel as editor. Professors Waldeyer and Posner are to continue the publication and traditions of Virchow's *Jahresbericht über die Fortschritte und Leistungen der gesammten Medizin.*

The plague in Mexico proves, on microscopic investigation, to be bubonic plague. People fled by hundreds from Mazatlan at first, but soldiers now prevent any emigration. The reports express the belief that the disease will not spread. U. S. Public Health officers are at the spot. Sanitation in surrounding cities is reported to be strenuous.

A Physician in the Ministerium of the Interior in Saxony.—Our German exchanges are rejoicing over the fact that a physician has been formally installed as a permanent member of the ministerium of the interior for Saxony. Dr. F. Renk has been selected for the post. He is a pupil of Pettenkofer and has long served as a member of the national council of health.

Fined for Assuming Title of Professor.—A charlatan at Hanover, Germany, had acquired the title of professor of music from some Italian school of music, and paraded this title of professor in all his advertisements and on his signs. The local court fined him $10 or to ten days' imprisonment for use of the title of professor as intended to deceive in regard to his medical standing.

Medical Correspondent in America.—Dr. Francis Munch has been sent to this country by the *Semaine Médicale* of Paris as special correspondent to write up the "*mouvement actuel de la science médicale*" in the United States. His first letter appears in the issue for December 24, and deals with Boston and Philadelphia, principally devoted to the work in radiotherapy by Williams, Ellis, Sweet and Rust.

Too Many Physicians.—The dean of the Paris faculty remarked at a recent meeting of the Academic Council that "families and teachers ought to dissuade young people from entering on a medical career unless possessed of independent means or exhibiting a very marked vocation for medical studies. There are too many physicians. This is very bad for the patients as well as for the physicians themselves."

Less Tuberculosis in Prussia.—The deaths due to tuberculosis were 31 to every 10,000 of the population in 1876; in 1891 the number was only 27; in 1896, 22; in 1901, 20. The number dropped from 36 to 22 in the cities, and from 28 to 17 in the rural districts. All the large cities show a diminishing death-rate from tuberculosis, and the decrease was apparent long before the sanatorium movement was inaugurated.

French National Subscription to Combat Tuberculosis.—An appeal has been issued by a committee of which Brouardel is chairman, calling on the people of France to subscribe toward a national fund for the erection and maintenance of sanatoria for consumptives. The appeal states that Germany now has 64 such sanatoria, sheltering 23,000 inmates, while France has only 2. It also states that during the last three years the German army has lost 1,300 men from tuberculosis, while France has lost 10,000 from this cause alone. An anonymous subscription of $50,000 has already been received.

Post-Graduate Facilities at Frankfurt.—The various medical institutes at Frankfurt a. M. are to be incorporated under the name of the Academy of Practical Medicine for the purpose of affording improved opportunities for post-graduate studies and research. A large sum has been raised for enlarging the present institutes and the city has appropriated funds to enlarge the hospital and establish an institute for anatomy and another for testing the purity of food supplies. Over half a million dollars has already been raised for the purpose in unofficial circles. The aim is to make Frankfurt an unparalleled center for post-graduate instruction.

The Eyelids in the Gore Case.—The cable reported the death of Ellen Gore in Paris from a bullet wound in the eye, and the arrest of the man who was alone with her at the time. The man has since been released on the sole ground that the lids and lashes of the eye penetrated by the bullet were intact. The medical experts, Socquet and Brouardel, testified that there was every probability that the injury was due to an accident, as the victim of an attempt to murder would naturally close the eyelids, or at least they would flutter more or less. The fact that they were intact in this case, they said, indicated that the victim was tranquil at the moment the ball struck her.

The Fifth International Congress of Applied Chemistry will begin its sessions in Berlin, May 31, 1903. The sections are as follows: Analytical chemistry, apparatus and instruments; chemical industries of inorganic products; metallurgy, mining and explosives; chemical industries of organic products; sugar industry; fermentation and starch manufacture; agricultural chemistry; hygienic, chemical and pharmaceutic chemistry; photochemistry; electrochemistry and physical chemistry; legal and agricultural problems in connection with the chemical industries. Dr. H. W. Wiley, chief of the Bureau of Chemistry, Department of Agriculture, Washington, D. C., chairman of the American committee, will give further information to those desiring it.

Prizes for Research on Fish Poisons.—As a number of cases of poisoning from the consumption of raw salted fish occur every year, the Russian authorities have offered prizes of $2,600, $800, and $530, for the best work on the nature of the poisonous substance, its action on the animal body, means

of preventing its formation, diagnosis, and the antidotes for it, and for poisoning from food in general. The smaller prizes will be awarded for the best work on any one or more of the above branches of the subject. All communications must be addressed to the "Ministère de l'agriculture et des domaines," St. Petersburg, and be received before Oct. 3, 1903. They may be in English, French, German, Latin or Russian. A similar prize was offered five years ago, but there were no contestants.

The French Pharmacists' Oath.—The Paris Pharmacists' Syndicate recently sued a pharmacist for illegal practices. His defense was that he was not a legal pharmacist and that there was not a single legally qualified pharmacist in France, as none of them had taken the oath which was established in the fourteenth century as an indispensable qualification. The oath has eighteen paragraphs; in one the pharmacist vows never to dispense an abortifacient or to practice abortive measures; never to substitute for any ingredient in a prescription without the advice "of some one wiser than I"; never to give a purge to a person sick with any acute disease, without previously consulting with some physician, and to contribute in every possible way to "the honor, the glory, the ornament and the majesty of medicine." Centuries have passed since this oath was exacted, and the pharmacist's defense was not accepted.

Further Progress in the Sanatorium Movement in Germany.—The sick benefit society which includes the district of Berlin has sent a circular to the employers of wage earners calling their attention to the new sanatorium at Beelitz and urging them to inform their workmen and workwomen that free accommodations are offered to all working people suffering from chronic affections such as neurasthenia, anemia, gastric disorders, bronchial catarrh, rheumatism, gout, debility after acute diseases, etc., in case their affection offers the prospects of a cure after a four to six weeks' course at the sanatorium. It is especially urged on wage earners still at work, but feeling the inroads of a chronic affection, who might be completely re-established by a course at the sanatorium. During the absence of the breadwinner at the sanatorium a weekly sum will be paid to his family. Employers are asked to use their influence to have their employes take advantage of the offer.

Prizes Distributed by Paris Academie de Medecine.—Only 22 of the 38 prizes offered were awarded, and the practice of dividing certain prizes has been discontinued on request of the executors of the endowments. Bezançon and Griffon were given 2,000 francs out of the Audiffred fund for their research on the cultivation of the tubercle bacilli in gelosed blood. Castaigne also received a prize of 2,300 francs for his methylene blue test of the permeability of the kidneys. A prize of 5,000 francs was bestowed on Jaboulay of Lyons for his "Surgery of the Nerve Centers, Viscera and Members." Cavazzani of Ferrara received a prize of 1,200 francs for research on the vasodilating center for the vessels of the brain. Ehlers of Copenhagen and Cohnheim of Dresden received a prize of 1,500 francs for their study of leprosy in Crete. Testut of Lyons also received a prize of 4,400 francs for his "Manual of Anatomy." No communications were received in competition for seven of the prizes. Among the medals awarded was one to Dr. G. Ullman of Chester, Pa., for his work on vaccination. He is a graduate of the Medical School of the University of Paris.

Dangers of Hypnotism.—A suit has recently been decided in Germany which has attracted much attention. Winkelmann of Berlin gave an entertainment of hypnotism at Insterburg, with the consent of the authorities. Among his subjects was a youth named Lau, who had always been very nervous. The other subjects showed no disturbances from the hypnotic suggestion, but young Lau became much excited, gasped for air after the seance, and was mentally unbalanced to such a degree that he had to be under restraint for four months. Although at present dismissed from the sanatorium, he is still incapable of entering business, and his family sued the "suggestor" for damages. The court, while recognizing that the possibly latent nervousness of the young man had been fanned into actual insanity in all probability by the hypnosis, yet the defendant had evidently not intended such a result, as he practices this means of livelihood under the eyes of the municipal and medical authorities. As the former had granted him permission to give the entertainment, notwithstanding the knowledge of his lack of special training, the charge against him was dismissed.

German Society for School Hygiene.—The sanatorium treatment of tuberculosis in Germany is for the benefit of adults. Children have not been regarded hitherto, while France has accommodations for 1,200 in its seashore children's sanatoriums. In the November meeting of the German Society for School Hygiene, Baginsky pointed out that scrofulous and tuberculous children should be classified as: 1, those with inflamed glands, eruptions and catarrhal inflammations; 2, those with actual but not open tuberculous lesions of bones, glands, or joints; 3, with open lesions of this kind, and 4, those with pulmonary tuberculosis. The anemic children of the first group require merely to be placed in a more favorable environment. Those with pulmonary lesions should be placed in a sanatorium for lung diseases, but the others are best treated in a seashore sanatorium. Experience teaches, he states, that bone and joint tuberculous lesions frequently heal without the necessity for an operation under the influence of the sea air. Other speakers mentioned that the climate of France was more favorable for the purpose than that of Germany, and Orth urged the erection of a seashore sanatorium at Naples or at the Madeiras. A committee was appointed to discuss ways and means.

LONDON LETTER.

Paraffin Injections for Nose Deformities.

Gersuny's method of treating deformities of the nose by paraffin injections has not been long adopted in England, but so far the results have been satisfactory. At the Clinical Society Mr. S. Paget read a paper on 25 cases, which is important in consequence of certain suggestions in technic. In his earlier cases he used Eckstein's paraffin, but he found that it has obvious disadvantages and no advantage over paraffin melting at a temperature of 25 or 30 F. lower. The best melting point he finds is between 108 and 115 F; he now uses paraffin melting at 111. Of many syringes he finds Eckstein's is the best: it keeps the heat well, can be easily worked with one hand and has a screw nut on the piston, which prevents any sudden running in of the paraffin, but it ought to have a short and strong steel needle. He thinks it is wrong to attempt to raise the skin with a tenotomy knife before injection, but if there has been exfoliation of bone so that a depressed and adherent cicatrix is produced it may be advisable to free the skin at this point. He emphasizes the fact that paraffin shrinks when it sets; and the paraffin that sets the hardest shrinks the most. The inevitable shrinkage may be so slight as to be hardly visible; it involves the addition about a week later of a few more drops of paraffin under cocain.

Syphilis and Life Assurance.

At the Edinburgh Medico-Chirurgical Society Dr. Byron Bramwell read an important paper on this subject. He regarded the life of a man who had syphilis as a damaged one, and did not think that an office should accept him as a first-class life, but should impose an "extra." Of course there were some exceptions. The statistics of assurance companies afforded no evidence as to the mortality from syphilis, and as to its effects on longevity. To arrive at some sort of an estimate —necessarily an underestimate—he picked out from such statistics the diseases due in a large proportion of cases to syphilis—tabes, general paralysis, and aneurism. Death due to syphilis is almost always the result of a tertiary lesion. Hence the importance of the date at which tertiary lesions develop. In 107 cases of grave cerebral and spinal syphilis 12.1 per cent. occurred in the first year, 40 per cent. during the first 5 years, and 68 per cent. during the first 10 years after infection. Probably tertiary lesions occurred in 10 per cent. of all cases of syphilis. Most observers seemed to think that the mortality from syphilis was almost entirely the result of typical tertiary lesions, but probably only a small portion was. A much larger proportion was due to aortic aneurism, aortitis and resulting aortic incompetence, and to para-syphilitic lesions (general paralysis and tabes), cirrhosis of the liver and arterial disease. In 32 cases of tabes the average duration of the disease was 8.8 years. In 17 of these, in which the exact date of infection was determined, the expectation of life was diminished by 270 years, or an average of 15.8 years. As to general paralysis of the insane, and it generally lasted from 2 to 6 years, the average age at death was 44 years. As to aortic aneurism it was an underestimate to ascribe 50 per cent. of the cases to syphilis. Applying these estimates to the Scottish Widow's Fund, of 3,658 deaths, 6 were due to tabes, 52 to general paralysis of the insane, and 24 to aortic aneurism. Granting that 75 per cent. of the deaths due to the two former diseases and 50 per cent. of those due to the latter disease were the result of syphilis, this gave 55.5 deaths. But in addition many cases of aortic valvular disease and some of cirrhosis of the liver and kidney were no doubt due to syphilis. Moreover,

there were doubtless some deaths certified as cerebral softening, apoplexy, hemiplegia, insanity, myelitis, paraplegia, atheroma, sclerosis of the coronary arteries, angina pectoris, myocarditis, laryngitis, etc. Finally the persistent and widespread effects of syphilis render it probable that the disease causes arterial degeneration and premature senile changes. All these considerations lead to the conclusion that the longevity of syphilitics, apparently healthy when they presented themselves for examination, was on an average shorter, probably considerably shorter, than it would have been if they had not had the disease.

Typhoid Fever from Contaminated Oysters.

A number of cases of typhoid fever have occurred at Portsmouth and Winchester, which are believed to be due to oysters taken from beds contaminated with sewage. The dean of Winchester has just died from typhoid fever, believed to have been contracted in this way, and among the victims is Dr. England, formerly surgeon to the Royal Hampshire County Hospital. At Southampton, also, 8 cases have occurred. A scare has been created in London, and the oyster merchants have sent circulars to the medical officers of health in localities in which there are oyster beds requesting reports. Those from the non-incriminated ones have been satisfactory.

Mr. Hutchinson's Leprosy Investigation in India.

At the Polyclinic Mr. Jonathan Hutchinson, who is about to go to India on a tour of investigation, read a paper on the present state of the leprosy question in connection with the Prince of Wales' Leprosy Fund. He said that he first planned the tour he was about to undertake 30 years ago. In the interval he had read everything which has come to hand on the subject of leprosy, and taken the evidence of a large number of the medical men, missionaries, and others who have resided in India. Through the whole of this period he has held firmly the conviction, which has strengthened as years has advanced, that leprosy is in the main a food disease; that it spreads only to a small extent by personal contagion, and that the one article of food which is to be suspected is badly-cured fish, eaten without its being sufficiently cooked. In all ages, and in almost every country where leprosy has prevailed, the popular belief has been that fish eating is in some way connected with it. The way in which the disease has waned and ultimately almost ceased in Europe with advancing civilization is in harmony with this belief. It advanced in inland districts of Europe with the advance of Christianity, and the observance of fish fasts, and it disappeared when Protestantism threw these fasts into disuse. Other influences are the development of agriculture and the increased production of other kinds of food. Norway and Iceland have always been conspicuous for the prevalence of the disease. The former has from time immemorial had the largest fishing trade in the world, and of the latter an old geographer wrote that it ought to be named "stock fish." In both of these places fish is still largely consumed. Over the whole world at the present day the prevalence is almost in ratio with the use of cured fish. Leprosy is not very prevalent on the main land of India. The average prevalence in India, South Africa and Norway is something less than 5 per 10,000. In Ceylon it does not reach 2 per 10,000; but in some of the smaller islands off the coast of India—Minicoy, for instance—where fish is eaten by the laboring population three times a day, its prevalence reaches the enormous ratio of 100 or 150 per 10,000. Among Mr. Hutchinson's more important inquiries will be the question whether the statements made by certain Hindus and Brahmins that they have never eaten fish are trustworthy.

Correspondence.

Beri-Beri in Louisiana.

ABBEVILLE, LA., Dec. 22, 1902.

To the Editor:—The history of this disease dates back many years, occurring principally in the Orient, along the coast of China and Africa. I have been unable to get much information on the subject. A short article appeared in THE JOURNAL, if I remember correctly, concerning it some time ago. In no work on practice or in any medical literature am I able to find a record of a single case occurring in Louisiana. Still, that this disease exists here has been proven beyond a question of reasonable doubt in my mind as well as in the minds of several physicians of prominence in southwest Louisiana. We have had many cases in our practice during the last five years.

As to its causes there seems to be little known. Some writers claim that beri-beri is due to a parasite, others to certain miasmatic germs developed in tropical climates, others claim that it is due to the eating of rice, which *per se* generates it, and still others claim the micrococcus is in the rice. This latter condition seems to have some bearing on the causation of the disease as it exists in Louisiana at the present date.

In the last fifteen years, southwest Louisiana—which up to that time had raised only a few barrels of rice—has developed this industry enormously, and we have now in this, Vermilion Parish, and several surrounding parishes, miles and miles of nothing but rice; so much so that we now raise in this part of the country more rice than is raised in all of the other states. What was a few years ago barren prairies, low, alluvial soil, and filled with wild cattle, is to-day a prosperous country occupied by industrious farmers raising virtually nothing but rice, which has proved very profitable to them. They have made it a sure crop by irrigation from deep wells and large sub-surface canals.

I have been practicing medicine in this parish for twenty-three years and up to five years ago never saw a case of beri-beri, nor anything resembling it. Since then, however, there have been in this district no less than forty cases of a disease which we have termed beri-beri.

Dr. Robert J. Young of this town has treated in the last five or six years nearly thirty such cases. Dr. C. J. Edwards, same town, has treated perhaps a half dozen or more. Dr. W. G. Young of Crowley, La. (the center of the rice district), has seen about the same number, and I have had seven or eight. The cases have occurred, without exception, in a locality surrounded by rice fields, and all the patients were heavy eaters of rice. Most of the patients gave a history of having had a slight chill, followed by a low febrile condition for about two days, profound prostration, loss of appetite, generally constipation, insomnia in the majority of cases, rapid heart action, anemic murmurs, anasarca, inability to lift the feet and when walking they moved their feet with a great deal of difficulty, and would invariably drag their legs as if from partial paralysis. In all of these cases there was multiple neuritis and in certain portions of the body, especially in the legs, anesthesia. While the patients were very apprehensive of their condition, not one case died. All recovered slowly under proper treatment. Some were sick several months before becoming once again their former selves.

All the physicians named and myself used similar treatment, which consisted of: If possible, a change of locality, baths, a good nutritious diet with plenty of milk, medication consisting of calomel and soda, cholagogue cathartics, followed with such as digitalis, convalaria, strophanthus, spartein and especially strychnin, which was kept up through the entire treatment in heavy doses, tr. fer. mur, and arsenic. Quinin seemed to have no effect.

These cases seem to occur always—we might say endemically—all within a radius of about twenty miles, and all came under my observation within a period of twenty-four months. Since then we have failed to see others.

FRANK FENWICK YOUNG.

NOTE.—A report on beri-beri by a Norwegian committee was published in THE JOURNAL of August 16, xxxix, p. 388. Abstracts of an interesting discussion on the same subject at the last meeting of the British Medical Association, published in the *British Medical Journal*, Sept. 20, 1902, appeared in THE JOURNAL on p. 941 of the same volume. The rice theory of the disease suggested by our correspondent was upheld in the discussion by Rost, whose views, as given in a paper previously published, will be found in the issue of THE JOURNAL for August 23, p. 454.—ED.

A Side Light on Ethics.

BURLINGTON, IOWA, Jan. 5, 1903.

To the Editor:—During the past year or two I have read in THE JOURNAL and other medical publications a good deal about "organization," "ethics" and "reciprocity," and I have even written a few lines on these subjects, which have found their

way into print; but I have seen nothing which so completely sums up the whole matter as Dr. Gillmore's letter in your current issue. Until we can get ethical unification—a oneness of purpose individually and collectively—it seems to me useless to talk about organization and reciprocity; and through one thing and another, mostly perhaps as Dr. Gillmore suggests, the absence of emphasis on the golden rule in the teaching course, we seem to be drifting farther and farther from this unification.

I do not wholly agree with Dr. Gillmore that commercialism is a basic fault. It may be difficult to harmonize commercialism with the golden rule; but as we must all be more or less commercial so long as we charge fees and send out bills for services, we should certainly make the effort. And if we only succeed in harmonizing the Chinese version: "Do not do unto others that which we should not like them to do unto us," the situation would be vastly improved. Truly yours,

H. B. YOUNG.

DETROIT, Jan. 3, 1903.

To the Editor:—I ask permission to add my approval to the wise, just and timely "thesis" under the above title by Dr. Robert T. Gillmore, which appeared in your issue of January 3.

In his communication the Doctor has so ably covered the ground that there is very little left for those who agree with him to say except to express their approval and add their sincere "Amen."

Those, if there are any such, who are disposed to differ with the Doctor's views are not likely to present their arguments either in the columns of THE JOURNAL or elsewhere. I have heretofore given such expression as I could to the feeling of shame and regret with which the commercial spirit at present animating and overruling our profession has affected me. Consequently Dr. Gillmore's presentation of the subject afforded me sincere gratification. With medical students and young physicians I have had an extensive and intimate acquaintance, and that I have been known as their friend will, I believe, be universally admitted. Nevertheless it has been my painful duty to preach "in season and out of season" against their openly-avowed passion for converting, with unseemly haste, their scientific and technical acquirements into filthy lucre, the first and most important question as to the essential nature of a case being too often "How much money is there in it?" instead of "What can I do for the best interest of this patient, and what can I learn from a careful study of the case?"

This spirit of commercialism exhibits itself in many ways, and unquestionably exercises a deleterious effect on the youthful aspirant, while at the same time it has a natural and inevitable tendency to prejudice against him "those seniors who by their labors have contributed," etc.

Many years of close observation have tended to convince me that few greater misfortunes can befall a young practitioner than too rapid success in the acquisition of practice and the premature growth of his bank account. It would appear, therefore, that the necessity for reform and improvement is not limited entirely to either one of the parties involved.

At any rate, there can be no room to question Dr. Gillmore's fundamental deduction: "If we are not content with the present condition of affairs we must begin at the very beginning. We must impress on the applicant for admission to our medical schools that something more is required of him than his fee, and satisfactory credentials as to his literary attainments. He must be capable of comprehending and appreciating the sentiments and essentials of the golden rule."

On the shoulders of his teachers must of necessity rest the vital responsibility of imbuing his youthful nature with so much of genuine devotion to science as will have the effect of overshadowing and crushing out in reasonable measure the deplorable spirit of commercialism. His study of ethics will then become a real labor of love, the actual practice thereof second nature, and his life's motto will be appropriately set forth in the words of old Polonius: "To thine own self be true, and it must follow e'en as night the day, thou canst not then be false to any man."

DONALD MACLEAN.

State Boards of Registration.

Maine.—The Maine Board of Registration of Medicine, according to the report of the examination held at Portland, November 11, 1902, sent by Dr. A. K. P. Meserve, secretary, examined in 7 subjects, by 70 questions. The percentage required to pass was an average of 75 and of not less than 60 in any one branch. The examination was written; 7 were examined, 6 passed, and 1 failed.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
501	H.	Hahnemann Med. Coll., Chicago...	1889	*86 2-7
502	R.	Coll. of P. and S., New York City.	1889	87
503	R.	Coll. of P. and S., New York City.	1901	80 6-7
504	R.	Laval University, Montreal, Can..	1901	78 4-7
505	R.	Baltimore Medical College.....	1902	87 4-7
507	R.	Medical School of Maine.....	1902	82

FAILED.

506	R.	Louisville Medical College, Ky....	1902	72 4-7

* Re-examination.

New York.—The New York State Board of Medical Examiners, according to James Russell Parsons, Jr., director, held examinations at Albany, Buffalo, New York, and Syracuse in September, 1902, at which the number of subjects was 7; percentage required to pass, 75; written examination; total number examined, 131; number passed, 95; number failed, 36.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
117	R.	Albany Medical College.....	1902	79.2
587	R.	Albany Medical College.....	1898	77.8
118	R.	Albany Medical College.....	1893	80.2
437	R.	Coll. of Phys. and Surgs., New York.	1899	89.1
488	R.	Coll. of Phys. and Surgs., New York.	1902	78.8
452	R.	Coll. of Phys. and Surgs., New York.	1900	80.8
559	R.	Coll. of Phys. and Surgs., New York.	1902	82.8
438	R.	Coll. of Phys. and Surgs., New York.	1902	82.7
574	R.	Coll. of Phys. and Surgs., New York.	1902	86.4
566	R.	Coll. of Phys. and Surgs., New York.	1902	86.4
490	R.	Coll .of Phys. and Surgs., New York.	1902	87.4
453	R.	Coll. of Phys. and Surgs., New York.	1901	82.8
436	R.	Coll. of Phys. and Surgs., New York.	1894	82.1
467	R.	Coll. of Phys. and Surgs., New York.	1902	83.0
465	R.	Coll. of Phys. and Surgs., New York.	1902	89.5
553	R.	Coll. of Phys. and Surgs., New York.	1901	87.2
610	R.	Coll. of Phys. and Surgs., New York.	1902	89.2
546	R.	Coll. of Phys. and Surgs., New York.	1901	82.1
545	R.	Coll. of Phys. and Surgs., New York.	1902	83.1
441	R.	Coll. of Phys. and Surgs., New York.	1902	89.2
558	R.	Coll. of Phys. and Surgs., New York.	1902	83.0
617	R.	Coll. of Phys. and Surgs., New York.	1902	83.4
614	R.	Coll. of Phys. and Surgs., New York.	1901	81.2
159	R.	Coll. of Phys. and Surgs., New York.	1902	84.4
306	R.	College of P. and S., Boston.....	1900	79.2
531	R.	Cornell University Medical College..	1902	87.1
430	R.	Cornell University Medical College..	1902	85.2
519	R.	Cornell University Medical College..	1901	83.4
102	R.	Cornell University Medical College..	1900	82.7
521	R.	Cornell University Medical College..	1902	91.7
534	R.	Cornell University Medical College..	1902	88.5
611	R.	Cornell University Medical College..	1902	86.4
413	R.	Long Island Medical College.....	1902	86.7
418	R.	Long Island Medical College.....	1901	90.5
523	R.	Long Island Medical College.....	1902	79.5
427	R.	Long Island Medical College.....	1901	91.1
619	E.	New York Eclectic Medical College..	1902	85.1
609	E.	New York Eclectic Medical College..	1902	83.0
320	H.	New York Homeopathic Med. College	1902	85.2
612	H.	New York Homeopathic Med. College	1902	88.8
116	H.	New York Medical College.....	1901	89.5
554	R.	Univ. and Bellevue Hosp. Med. Coll..	1902	85.4
487	R.	Univ. and Bellevue Hosp. Med. Coll..	1898	81.7
613	R.	Univ. and Bellevue Hosp. Med. Coll..	1902	84.8
415	R.	Univ. and Bellevue Hosp. Med. Coll..	1902	91.8
602	R.	Univ. and Bellevue Hosp. Med. Coll..	1899	77.5
586	R.	Univ. and Bellevue Hosp. Med. Coll..	1902	81.1
321	R.	University of Buffalo Medical Dept..	1900	83.8
308	R.	University of Buffalo Medical Dept..	1902	79.4
312	R.	University of Buffalo Medical Dept..	1892	83.0
581	R.	University of California.....	1899	86.7
311	R.	University of Michigan.....	1889	80.7
502	R.	University of Minnesota.....	1897	83.0
530	R.	University of Pennsylvania.....	1902	91.1
528	R.	University of Pennsylvania.....	1902	84.5
529	R.	University of Pennsylvania.....	1902	85.7
456	R.	University of Pennsylvania.....	1897	86.1
583	R.	University of Pennsylvania.....	1900	90.2
532	R.	University of Pennsylvania.....	1898	†88.4
615	R.	University of the South.....	1901	79.2
419	R.	University of Virginia.....	1894	86.5
439	R.	University of Vienna, Austria.....	1900	80.0
560	R.	University of Berlin.....	1891	81.5
493	R.	University of Berlin.....	1896	78.5
473	R.	University of Giessen.....	1896	87.7
496	E.	University of Bologna.....	1897	‡81.8
621	E.	University of Naples.....	1897	**86.7
414	R.	University of Naples.....	1896	77.5
482	R.	University of Naples.....	1898	79.8
431	E.	University of Naples.....	1900	79.2
409	R.	University of Palermo.....	1894	77.4

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per Cent.
410	R.	University of Turin	1899	82.4
484	R.	Gross Medical College, Denver	1901	88.1
468	R.	Yale University Medical Dept	1899	81.7
423	R.	Atlanta Medical College	1897	84.7
598	R.	Rush Medical College, Chicago	1902	86.0
596	R.	Baltimore University	1902	80.4
422	R.	Baltimore University	1899	79.4
152	R.	Johns Hopkins University	1901	81.8
573	R.	Maryland Medical College	1901	80.1
516	H.	Boston University School of Med.	1902	90.4
518	H.	Boston University School of Med.	1900	85.7
517	H.	Boston University School of Med.	1901	89.2
567	R.	Harvard University	1900	91.0
592	R.	Harvard University	1902	92.7
600	R.	Harvard University	1901	92.7
466	R.	Harvard University	1901	84.7
451	R.	Detroit College of Medicine	1902	81.0
486	H.	Cleveland Univ. of Med. and Surg.	1896	80.8
562	R.	Jefferson Med. Col., Philadelphia	1902	85.0
533	R.	Jefferson Med. Col., Philadelphia	1902	82.2
571	R.	Medico-Chirurgical Col., Philadelphia	1902	*79.4
420	R.	Vanderoilt University	1900	85.2
161	R.	Queen's University, Kingston, Ont.	1898	85.5
526	R.	Royal Coll. of P. and S., Edinburgh and Faculty of P. and S., Glasgow	1900	†84.7

FAILED.

402	R.	Coll. of Phys. and Surgs., New York.	1901	77.5
542	R.	Coll. of Phys. and Surgs., New York.	1901	69.5
543	R.	Coll. of Phys. and Surgs., New York.	1901	66.7
544	R.	Coll. of Phys. and Surgs., New York.	1902	74.8
302	R.	Coll. of Phys. and Surgs., Chicago.	1894	65.0
552	R.	Coll. of Phys. and Surgs., Boston	1899	78.8
620	R.	Long Island College Hospital	1902	77.0
597	E.	New York Eclectic Medical College.	1902	65.8
309	R.	University of Buffalo	1893	59.7
307	R.	University of Buffalo	1902	††81.1
301	R.	University of Michigan	1870	61.5
154	R.	University of Vermont	1902	80.0
570	R.	University of Munich	1899	58.4
551	E.	University of Naples	1895	70.2
498	E.	University of Naples	1894	64.8
435	R.	University of Naples	1892	76.1
481	R.	University of Naples	1899	67.5
433	E.	University of Naples	1900	80.0
593	E.	University of Naples	1898	74.5
471	R.	University of Naples	1900	53.2
411	R.	University of Naples	1886	68.0
549	R.	University of Naples	1900	60.8
572	R.	University of Palermo	1895	69.4
550	R.	University of Palermo	1898	67.7
432	R.	University of Palermo	1891	60.8
489	R.	University of Turin	1898	79.1
524	E.	Georgia Coll. of Ecl. Med. and Surg.	1888	81.1
114	H.	Hahnemann Medical Coll., Chicago	1879	24.1
569	R.	Illinois Medical College, Chicago	1899	48.0
606	R.	Rush Medical College, Chicago	1898	77.8
605	R.	Baltimore Medical College	1901	77.8
303	R.	Baltimore Medical College	1902	75.2
547	R.	Baltimore Univ. School of Medicine.	1898	67.4
527	R.	Maryland Medical College, Baltimore	1901	74.0
463	R.	Sewanee Medical College	1901	78.2
492	R.	Imperial Jurief (Darpat) University	1895	72.8

* License held for registration of college.
† License held for preliminary education.
‡ Final examination passed before state board.
** First eight examinations taken before state board.
†† Fraud.

Miscellany.

Clippings from Lay Exchanges.

FLUENCY A DESIDERATUM.

"Dr. —— has recently come to this city. . . Dr. —— is a German, speaking that language fluently, which will be appreciated by those of that nationality. . . ."—*Baraboo* (Wis.) *Republic.*

DISORDER OF AORTIC ARTERIES.

"—— dropped dead. . . . in the office of Dr. ——. Dr. —— performed an autopsy and found a disorder of the aortic arteries which ceased to feed the heart."—*Milwaukee* (Wis.) *News.*

ONE DOLLAR ADMISSION.

Euclid.—"Dr. —— has been fixing up a suite of rooms over the store for office purposes. They are large bright and cheery, and almost make one want to be a little sick so as to call on him and enjoy their brightness. One dollar only, will give any one that privilege."—*Crookston* (Minn.) *Farm Journal.*

Tentative Diagnosis.—Nothing has a greater tendency to increase a man's skill in inductive reasoning than the habit of writing down, after each examination, the diagnosis that seems to him most likely, no matter how many question-marks he puts after it, nor how frequently he changes this diagnosis at subsequent examinations. The very necessity of putting in concrete form what is too often a hazy idea, sharpens the faculties and stimulates the mental processes.—*Phila. Med. Jour.*

The Eye Should Have a Broad Range.—One should have the opportunity of seeing a long distance. We are denied this opportunity. We are hemmed and hedged in until the distance we are capable of seeing is very short indeed. This is why I am a strong advocate of parks, of promenades. Green is naturally a restful color, and if the city could be provided with long avenues and splendid parks, where one's eyes could stretch out in a long vista, it would be a great thing.—Quoted from an optician in *New Orleans Times-Democrat.*

Curability of Tuberculosis of the Pharynx.—Veis describes five cases of tuberculosis of the pharynx, isolated and primary in one, and accompanied by insignificant pulmonary lesions in the others. He succeeded in curing them all by local treatment, for which he recommends a concentrated solution of trichloracetic acid. Improvement was manifest in his cases, which were all ulcerative, after the first application of this acid, under which the tissues turned white. The cauterization can be repeated every four or five days until complete cicatrization.—*Arch. f. Laryngol.*, xii, 3.

The Nobel Prizes.—Considerable disappointment is being expressed, says the *Allg. Med. Ct.-Ztg.*, that the executors of the Nobel estate are not carrying out to the letter the wishes of the testator in regard to the prizes awarded. The will stipulated that the achievements for which the prizes are to be bestowed should be recent. This stipulation applied to the work of Koss, but not to that of Fischer, who received the chemistry prize. His fame rests on his synthesis of the various kinds of sugars, and similar works many years ago. The physics prize was divided between Lorentz of Leyden and Zeemann of Amsterdam, who first announced the discovery that optic phenomena could be influenced by magnetic action. The prize for literature was given to Mommsen, whose great historical work dates from fifty years back. The testator evidently intended to encourage and sustain struggling investigators rather than to reward persons already resting on their laurels.

Book Notices.

STUDIES FROM THE DEPARTMENT OF PATHOLOGY OF THE COLLEGE OF PHYSICIANS AND SURGEONS, Columbia University, N. Y. Vol. VIII. For the Collegiate Year 1901-2. Paper.

With the apparent exception of the first article on the "Morphology of Ganglion Cells in the Rabbit," this volume is made up of reprints from various medical journals, all of them duly credited with the source of their first appearance. The director says, in his preface, that it seems that this form of publication—first, the wider circulation which current medical journals afford, and the subsequent grouping together of reprints—would more certainly fulfill the aims of such studies than would a separate department or university publication. The only objection we have to offer is that the difference in type, margin or pages, etc., makes a very clumsy arrangement. This, however, is only a minor objection. The book is a valuable collection of important monographs on the subject considered.

A TREATISE ON THE DISEASES OF THE EYE, NOSE, THROAT AND EAR. For Students and Practitioners. By Various Authors. Edited by William Campbell Posey, A.B., M.D., Professor of Ophthalmology in the Philadelphia Polyclinic; and Jonathan Wright, M.D., Attending Laryngologist to Kings County Hospital. Illustrated with 650 Engravings and 35 Plates in Colors and Monochrome. Cloth. Pp. 1238. Price, $7.00. Philadelphia and New York: Lea Brothers & Co. 1902.

One's first impression of this book is that the color of the binding is abominable. It is positively displeasing to the eye, whether the book is viewed by itself or with other works on the shelves of one's library. We certainly trust that the future editions will appear in a more rational dress.

It is an octavo volume of 1238 pages, 685 of which are devoted to the eye, 386 to the nose and throat, and 128 to the ear. It is well printed on good paper, which, fortunately, is not so glossy as much of the highly calendered paper used in modern text-books and magazines. Most of the

colored plates and illustrations are admirable, but a few are so bad that we wonder at their being used. It is impossible to convey an adequate idea of the extent and scope of the work without giving the table of contents, which follows:

THE EYE. Examination of the Eye, by William Campbell Posey, M.D. The Physiology of Vision, by William Norwood Suter, M.D. Refractive Errors in General, by Alexander Duane, M.D. The Motions of the Eyeball and Their Derangements, by Casey A. Wood, M.D. Diseases of the Orbit, Lachrymal Apparatus, and Lids, by R. A. Reeve, M.D. Diseases of the Conjunctiva, Cornea, and Sclera, by John E. Weeks, M.D. Embryology of the Eye: Anomalies, Diseases, and Injuries of the Iris, Ciliary Body, Choroid, and Vitreous, by H. V. Würdemann, M.D. Sympathetic Ophthalmia, by H. Gifford, M.D. Diseases of the Retina, Optic Nerve, and Its Cerebral Origin, by T. Holmes Spicer, F.R.C.S. Eng. Diseases of the Crystalline Lens, by Edward C. Ellett, M.D. Glaucoma, by E. Treacher Collins, F.R.C.S. Eng. Disturbances of Vision without Apparent Lesion, by Elmer G. Starr, M.D. The Eye in Its Relation to General Diseases, by C. F. Clark, M.D. General Preparation for Operations on the Eye, by Clarence A. Veasey, A.M., M.D. The Technique of the Pathological and Bacteriological Examinations of the Eye, by Edward A. Shumway, B.S., M.D.

NOSE AND THROAT. The Histological Pathology of Diseases of the Nose and Throat, by J. L. Goodale, M.D. Methods of Examination; Instruments and Apparatus and Their Use, by J. E. Newcomb, M.D. Inflammatory Diseases of the Upper Air Passages; Hay Fever; Rhinorrhea; Asthma; Influenza, by Charles W. Richardson, M.D. Diphtheria of Nose and Throat; Intubation; Syphilis, Tuberculosis, Lupus and Leprosy of Nose and Throat; Chronic Laryngeal Stenosis; Foreign Bodies in Nose and Throat; Rhinoliths, by William Kelly Simpson, M.D. Neoplasms of the Nose and Larynx; The Local, Medicinal, and Surgical Treatment of the Larynx, by W. E. Casselberry, M.D. Diseases of the Accessory Sinuses, by St. Clair Thomson, M.D., F.R.C.S., Eng. Diseases of the Oropharynx and Nasopharynx, by H. S. Birkett, M.D. Neuroses of the Nose and Throat, by Emil Mayer, M.D. External Deformities of the Nose; Cleft Palate, by F. E. Hopkins, M.D.

THE EAR. Examination of the Ear; Diseases of the External Ear; Diseases of the External Auditory Meatus; Otomycosis; Foreign Bodies; Wounds of the Membrana Tympani, by F. E. Hopkins, M.D. Diseases of the Internal Ear and Auditory Nerve; Deaf Mutism, by E. A. Crockett, M.D. Purulent Inflammation of the Middle Ear, by Henry Arnold Alderton, M.D. Chronic Non-Suppurative Middle-Ear Disease, by Arthur H. Cheatle, F.R.C.S. Eng.

The names of the authors are a sufficient guarantee that the subjects assigned have been well treated, and that the matter has been brought down to date. Each writer has covered completely the topic assigned, thus avoiding the repetitions and contradictions common to systems. As a rule, the articles are clearly and concisely written, and the book as a whole will be appreciated by the general practitioner, and at the same time the undergraduate will find nearly all the information he needs on these subjects and more than he has time to master. Although it enables the reader to become familiar with the style of many and to relax or concentrate his attention, according to the perspicuity of the individual writers, yet we confess to some disappointment in reading almost all of these composite works on account of the distraction caused by the various styles. In other words, it appears to us much easier to grasp and to retain the meaning when a single style, even though not altogether to our liking, pervades a book from cover to cover. The chapter on the relation of the eye to general diseases will be of special interest to the general practitioner, and that on the pathology of diseases of the throat, nose and ear will be found instructive even to the specialist. There is so much to praise in this work and so little to criticise one dislikes to make an adverse criticism. We imagine, however, that many oculists will be astonished on reading the chapter on refraction by Dr. Doane. On page 98 he says, "A certain amount (0.25 to 0.50 D.) of primary astigmatism may be regarded as *physiological* in that at least that amount is found in nearly every eye." And also, on page 131, "Astigmatism of only 0.25 or 0.50 D. I do not prescribe for, unless the symptoms (asthenopia, blurring of sight, etc.) seem particularly to call for the correction, or unless the patient has to use his eyes for very close and continuous work, or finally, unless the patient is going to use a glass anyhow, in which case I regularly add the cylinder correction that he requires, however small." It seems very difficult to reconcile these statements with the fact that many patients of many oculists are securing complete relief from distressing headaches by wearing constantly the correction for 0.25 and 0.50 D. of astigmatism.

PSYCHOPATHOLOGICAL RESEARCHES. Studies in Mental Dissociation with Text Figures and Ten Plates. By Boris Sidis, M.A., Ph.D., Director of the Psychopathological Laboratory. Published under the Auspices of the Trustees of the Psychopathic Hospital, Department of the New York Infirmary for Women and Children. Cloth. Pp. 329. Price, $3.00 net. New York: G. E. Stechert. 1902.

This may be considered as a sort of posthumous publication of the New York State Pathologic Institute. The institution still exists, but under other management. This is a publication of a research in a line which has possibly and apparently been discontinued by that institution. This is not said in disparagement of the institute, for we have no doubt under its present management its work will be as useful in the future as in the past, though under other direction and with a somewhat different policy. The book consists of a clinical narration of cases, with special relation to the functional and organic nervous pathologic states, and will be of interest to the psychologist and neurologist, though hardly so to the general practitioner, notwithstanding its narration of cases which would have a certain amount of interest. The conclusions of most interest as regards these dissociated states in psycho motor and psycho-pathologic conditions are those as regards the relation of functional to organic disease, and especially the nature of so-called psychic epilepsy, which the author considers sometimes a functional neurosis. The book is published under the authority of the trustees of the Psychopathic Hospital Department of the New York Infirmary for Women and Children, and another work on Principles of Psychology and Psychopathology is promised to appear soon.

A MANUAL OF MEDICAL TREATMENT OR CLINICAL THERAPEUTICS. By I. Burney Yeo, M.D., F.R.C.P., Emeritus Professor of Medicine in King's College, London. Tenth Edition. Fifteenth Thousand. Two Volumes. Cloth. Pp. 696. Price, $5.00. Chicago: W. T. Keener & Co. 1902.

The value of this work is clearly shown by the demand. The author includes in Volume I the therapeutics of the diseases of the organs of digestion, the heart and blood vessels and of the blood and ductless glands, diseases of the respiratory organs, including a chapter on the prophylaxis and sanatorium treatment of phthisis, which is concluded in Volume II. The treatment of erysipelas and of hay fever has received additional consideration in Volume I, in which chapters the experience of American authors has been properly recognized. In Volume II the author discusses the treatment of diseases of the liver, urinary and renal affections, nervous system, constitutional diseases and specific infective diseases. Additional subjects also receive consideration which have not been considered in previous editions, such as paralysis agitans, cerebral tumors, cerebrospinal fever, rachitis, scurvy and purpura. The author treats the different subjects from the standpoint of the disease and gives a thorough outline of the general treatment of the disease, prophylactic as well as medicinal, and then considers the complications individually. Formulæ are appended to each chapter which are adapted to the different stages of that disease. The principal fault of the work is that some of the formulæ contain ingredients taken from the British Pharmacopeia which do not occur as standard preparations in American materia medicas. But the large experience of the author in therapeutics is embodied in these volumes in such a manner as to render them the peer of anything in the line of treatment.

THE MEDICAL RECORD VISITING LIST OR PHYSICIANS' DIARY FOR 1903. New Revised Edition. Leather. Price, $1.25. New York: Wm. Wood & Co. 1902.

This is one of the standard visiting lists and one of the best. The volume for 1903 has been considerably improved. It contains a mass of information in a very small space, besides the usual well-arranged blank pages for records of visits, etc.

Marriages.

W. A. HOLLIS, M.D., to Miss Aldah Leach, both of Hartford City, Ind., December 24.

S. S. MYERS, M.D., to Miss Joycie P. Weaver, both of Centreville, Kan., November 26.

ERNEST LAPLACE, M.D., to Miss Katharine Borsch, both of Philadelphia, December 16.

ALFRED J. STOCKER, M.D., Erie, Ill., to Miss Nettie Stratton, at Belleville, Ont., December 4.

J. LOUIS C. PERRILLIAT, M.D., to Miss Marie Louise Caiborne, both of New Orleans, December 9.

JOSEPH JAMES HARRISON, M.D., to Miss Edna Earl Goans, both of London, Tenn., December 23.

PHILIP SCHUYLER DOANE, M.D., to Miss Helen Pullman Stewart, both of Chicago, January 1.

ELWIN O. CHURCH, M.D., Henry, S.D., to Miss Ethel Feay Davison of Kampeska, S.D., December 25.

THOMAS OVERTON BURGER, M.D., to Miss Hallie L. Bellamy, both of McMinnsville, Tenn., December 17.

FREDERICK S. BOWEN, M.D., Woodburn, Iowa, to Miss Agnes Sullivan of Newburgh, N. Y., December 21.

CARL I. SULZBACHER, M.D., Kansas City, Mo., to Miss Decimond Minor of Chillicothe, Mo., December 11.

PHILIP GIBSON GARY, M.D., Wakeman, Va., to Miss Laura Irene Robbins of Lester Manor, Va., December 23.

ARTHUR BUCKNER HARRIS, M.D., Cannelton, W. Va., to Miss Caroline B. Lyons, at Charlottesville, Va., December 23.

ALFRED AUSTIN BECKER, M.D., Jamestown, N. Y., to Miss Maude Jane Burch of New Richmond, Pa., December 24.

DAVID T. MUIR, M.D., Alden, Kan., to Miss Harriet M. Peters of Petersburgh, N. Y., at Kansas City, Mo., December 24.

GEORGE MILTON BOYER, M.D., Washington, D. C., to Miss Annie Marie Bowman of New Gaithersburg, Md., December 24.

HARRISON C. HOPPER, M.D., Galesburg, Ill., to Miss Clementine Van Ravenswaay of The Hague, Holland, at Booneville, Mo., December 25.

Deaths.

Dennis J. Loughlin, M.D. Jefferson Medical College, Philadelphia, 1881, formerly city commissioner for the Moyamensing District; member of the state legislature; appraiser of drugs at the port of Philadelphia, etc., died at his home in that city, December 27, from Bright's disease, after an illness of three months, aged 55.

William Stenning Harding, M.D. Edinburgh, 1836, in active professional life in St. John, N. B., until a few years ago, and until 1895 medical inspector of the port of St. John, died suddenly at his home in that city, Dec. 19, 1902, aged 88.

James Codrus Lawrence, M.D. Columbus (Ohio) Medical College, 1889, twice president of the Columbus Academy of Medicine, died at his home in Columbus, Dec. 23, 1902, after a long illness, from tuberculosis, aged 43.

Rush Winslow, M.D. Rush Medical College, Chicago, 1866, four times mayor of Appleton, Wis., died at St. Elizabeth's Hospital in that place, Dec. 27, 1902, nine days after an operation for appendicitis, aged 59.

William T. Hughes, M.D. University of Pennsylvania, Philadelphia, 1873, of Bedford, Pa., died at the German Hospital, Philadelphia, Dec. 21, 1902, from sepsis, following an operation for appendicitis.

William F. Penwarden, M.D. Bellevue Hospital Medical College, New York. 1883, of Grand Rapids, Mich., was instantly killed in a railway accident at Wanstead, Ont., December 26, aged 42.

George R. Weeks, M.D., surgeon U. S. V. in the Civil War, for many years a resident of Little Rock, Ark., died at his home in Los Angeles, Cal., January 1, aged 76.

George Barton Beeler, M.D. University of Maryland, Baltimore, 1876, died suddenly at his office in Baltimore, Dec. 23, 1902, aged 49.

R. Herbert Clement, M.D. Hahnemann Medical College of the Pacific, San Francisco, 1893, died in that city, Dec. 23, 1902, aged 32.

William H. Fox, M.D. University of Pennsylvania, Philadelphia, 1849, died at his home in Ashland, Va., Dec. 31, 1902, aged 80.

Deaths Abroad.

Dr. W. Bernatzik, professor of general pathology and materia medica at the Josefs Akademie at Vienna.——**Dr. W. Sobieranski,** professor of materia medica at Lemberg.——**Dr. K. v. Kupffer,** professor of anatomy at Munich, in his seventy-fourth year.——**Dr. Rudolf Massini-Meyenrock,** professor of materia medica at Basle, director of the polyclinic, and chief of the medical department of the Swiss army.

Association News.

New Members.

Report of new members for December, 1902:

ALABAMA.

Williams, Wm. C., Shelby.
Green, Henry, Dathan.
Torrance, Gaston, Birmingham.

ARKANSAS.

Bogart, Julius A., Wheatley.
Mann, R. H. Y., Texarkana.

CALIFORNIA.

Wemple, E. L., San Francisco.
Tinsman, Charles M., Adin.
Wehrly, John, Santa Ana.
Lindsay, Wm. K., Courtland.
Loomis, Melville LeRoy, Beckwith.

COLORADO.

Gilbert, Oscar M., Boulder.

CONNECTICUT.

Pierce, Elbridge W., Meriden.
Cohan, Timothy F., New Haven.

DELAWARE.

Belville, Frank, Delaware City.

DISTRICT OF COLUMBIA.

Van Rensselaer, John, Washington.
Ferguson, C. E., Washington.

GEORGIA.

Morgan, J. B., Augusta.
Martin, Henry H., Savannah.
Gholston, W. D., Danielsville.

IDAHO.

Taylor, John M., Boise.

ILLINOIS.

Long, H. W., Yale.
Grossman, Frederick A., Chicago.
Wilcox, Geo. G., Seneca.
Bieringer, W. A., Chicago.
Dethlefsen, Geo. H., Chicago.
Hall, Alfred M., Chicago.
Gentles, H. W., Chicago.
Pusey, Brown, Chicago.
Miller, Geo. H., Chicago.
Orton, Susanne, Chicago.
Porter, Wm. A., Chicago.
Carver, S. C., Chicago.
Falls, S. K., Chicago.
Tivnen, Richard J., Chicago.
Jones, Herbert C., Decatur.
Mease, C. L., Freeport.

INDIANA.

Leaming, Lewis, Otterbein.
Dresch, Chris. A., Wishawaka.
Gibbons, John A., Mitchell.
Wilcox, Frank H., New Albany.
Allen, Irvin O., Metamora.
Leach, W. J., Sellersburg.
Powell, Dwight C., Logansport.
Armstrong, Lewis P., Newtown.
Bernheimer, H. L., Terre Haute.
Leedy, Charles V., Anderson.
Davis, Fielding L., Evansville.
Gemmill, Henry C., Markle.

IOWA.

Taylor, Chas. B., Nassau.

KANSAS.

Dallal, Joseph J., Norcatur.
Kenney, Chauncey S., Norcatur.
Warriner, W. L., Topeka.
Keith, Henry H., Topeka.
Pickerel, Joseph F., Lincoln.
Boone, Wm. M., Highland.
Brown, Kent O., Topeka.
Hoxie, Geo. H., Lawrence.
Purdue, G. C., Wichita.

KENTUCKY.

Asman, Bernard, Louisville.
Fallis, Robert G., Louisville.
Stone, Thos. W., Bowling Green.
Martin, Josephus, Cynthiana.
Harris, S. J., Philpot.

LOUISIANA.

Storck, J. A., New Orleans.
Watson, D. L., New Orleans.
Thibaut, Pierre L., New Orleans.
Walet, E. H., New Orleans.
Graner, Edwin J., New Orleans.

MARYLAND.

McDowell, C. C., Baltimore.
Moseley, Wm. E., Baltimore.
Stone, Daniel E., Mt. Pleasant.

MASSACHUSETTS.

Newton, Wm. C., Revere.
Newhall, Lawrence T., Brookfield.
Baldwin, F. W., Danvers.
Cook, Chas. H., Natick.

MICHIGAN.

Gurd, Adeline E., Detroit.
Taylor, Harry F., Mt. Clemens.
Richter, E. P. W., Saginaw.
Van DeWalker, Edward C., Sutton's Bay.
Curtis, Elmore E., Saginaw.
Blanchard, Francis R., Lakeview.
Grant, Jr., Charles L., Chippewa Lake.
Braley, Frank W., Saranac.

MINNESOTA.

Olsen, Otto R., St. Charles.

MISSISSIPPI.

Wilkinson, E. T., West Point.
Carder, Thos. A., Lula.
Street, D. P., Vicksburg.
Erskine, P. Odeneal, Jackson.

MISSOURI.

Trotman, C. A., St. Louis.
Overholser, M. P., Harrisonville.

MONTANA.

Conyngham, E. F., Philipsburg.
Kingsbury, W. V., Dillon.
Long, Willard A., Lewistown.

NEBRASKA.

Elmore, J. Q., Gordon.
Meisenbach, G. W., Plymouth.

NEW HAMPSHIRE.

Dinsmoor, S. M., Keene.
Perkins, Frank B., West Derry.
Anthoine, I. G., Nashua.

NEW JERSEY.

Meigh, Josiah, Bernardsville.
Chattin, J. F., Trenton.

NEW YORK.

Wise, H. Edwin, Turner.
Blaauw, Edmond E., Buffalo.
Ogden, John P., New York.
Moore, V. A., Ithaca.
Richards, Seymour S., Frankfort.
Hurd, Edward F., New York.
Wijetunge, V., Brooklyn.
Burgess, Daniel M., New York.
Eckerson, J. Fred, Shelby.
White, H. J., Troy.
Mosher, Burr B., Brooklyn.

NORTH DAKOTA.

Welch, W. H., Larimore.
Crawford, John, Esmond.

OHIO.

Dice, S. D., Xenia.
Stroehley, Erwin O., Cincinnati.
Mallow, Edgar H., Dayton.
Green, D. W., Dayton.
Foote, Chas. G., Cleveland.
Stockton, Geo., Columbus.

OKLAHOMA.

Walker, Harry, Pawhuska.
Ball, Wm. A., Box.

PENNSYLVANIA.

Oglesby, James, Danville.
Fitch, A. B., Factoryville.
Sollenberger, Aaron B., Waynesboro.
Farley, Joseph, Philadelphia.
Walsh, Joseph, Philadelphia.
Pfahler, G. E., Philadelphia.
Kercher, Delno E., Philadelphia.
Wenner, E. Bruce, Philadelphia.
Watson, Wm. N., Philadelphia.
Leach, W. W., Philadelphia.
White, Courtland Y., Philadelphia.
Kohn, Bernard, Philadelphia.
Foltz, J. C., Chestnut Hill, Phila.
Crawford, J. K., Philadelphia.
Read, A. J., Philadelphia.
Uhle, Alex. A., Philadelphia.
Hayes, Senes E., Weedville.
Neff, Chas. C., St. Marys.
Espy, John S., Pittsburg.
Wadhams, Raymond L., Wilkesbarre.
Lake, David H., Kingston.
Huebner, Erwin F., Allentown.
Lamade, Albert C., Williamsport.
Kocher, Q. S., Gradatim.
Painter, A. P. N., Kittanning.

Wallis, A. W., Pittsburg.
Stroup, Geo. H., Eddington.
Wilson, H. S., Smoke Run.
Smith, Alfred C., Brownsville.
Smith, C. H., Uniontown.
Wood, Edward H., Homestead.

RHODE ISLAND.

Powell, Stephen C., Newport.
Cooke, Harry A., Providence.
Lewis, James N., Ashaway.

SOUTH CAROLINA.

Lewellen, Jesse DeL., Friendfield.
Redfearn, A. M., Clemson College.
Hinnant, T. B., Lake City.
Hanahan, R. B., Wainsboro.
Patterson, Edward L., Barnwell.
Gray, J. Louis, Anderson.

SOUTH DAKOTA.

Beeson, J. B., Columbia.
Kenaston, H. R., Bonesteel.
Gundermann, H. R., Selby.

TENNESSEE.

Ridings, Edw. W., Dickson.
Acres, Frank M., Dover.
Hill, Jr., L., Covington.
Sullivan, Claude C., Waverly.
Neblett, L. L., Slayton.

TEXAS.

Turner, S. T., El Paso.
Pullen, W. B., Jacksonville.
Chase, Ira C., Ft. Worth.
Haden, Henry C., Galveston.
Carter, W. S., Galveston.
Keiller, Wm., Galveston.
Reuss, Jo. Henry, Cuero.
Marchman, Oscar M., Grand Saline.
Sartor, Elias R., Biard.
Noster, Alfred H., New Braunfels.
Pope, J. G., Coleman.
O'Barr, J. T., Ledbetter.

UTAH.

Forbes, H. B., Ogden.

VERMONT.

Morgan, John C., Stowe.
Allen, Lyman, Burlington.
Bates, Chas. H., Ludlow.

VIRGINIA.

Caton, Wm. P., Dumfries.
Tipton, John A., Hillsville.
Robinson, Malcolm G., Austinville.
Davidson, A., St. Albans.
Rucker, Jos. A., Bedford City.
Moseley, Jr., E. J., Richmond.
Gordon, Wm. S., Richmond.
Osborne, Andrew J., Lawrenceville.
McCulloch, Chas., Howardsville.
Taliaferro, Madison Mills, Va.
Wright, Otho C., Jarratts.

WEST VIRGINIA.

Stille, W. S., Parkersburg.
Jarvis, J. W. P., Amos.
Peck, Chesley R., Bridgeport.
Stewart, W. DeWitt, Moundsville.
Jamison, W. A., Fairmont.
Woodford, Alonzo Howe, Belington.
Richmond, B. B., New Richmond.
O'Brien, Jr., John, Lawton.

WISCONSIN.

Schmeling, A. F., Columbus.
Thorndike, Wm., Milwaukee.
Reich, Hugo C., Sheboygan.
Hadley, Dudley A., Oconomowoc.
Doyle, J. H., Little Chute.
Miller, Wilmot F., Milwaukee.
Johnson, Fred Gordon, Lake Nebagamon.
Ogden, H. V., Milwaukee.

WYOMING.

Riser, Fred'k L., Rawlins.

Medical Organization.

Douglas County (Kan.) Medical Society.

This society has adopted the constitution issued by the American Medical Association, and has been affiliated with the state society.

Chattanooga and Hamilton County (Tenn.) Medical Society.

The Chattanooga Medical Society met Dec. 19, 1902, and in adopting the constitution and by-laws suggested by the American Medical Association, changed its official name to the Chattanooga and Hamilton County Medical Society.

Washtenaw County (Mich.) Medical Society.

This society met at Ann Arbor, Oct. 22, 1902, for the purpose of reorganization along the lines detailed by the American Medical Association. Drs. Nathan H. Williams, Jackson, councilor for the Michigan State Medical Society, Second District; Albert E. Bulson, Jackson, president of the State Medical Society, and Victor C. Vaughan, Ann Arbor, member of the House of Delegates of the American Medical Association, spoke in favor of reorganization. The standard county constitution recommended by the Association was unanimously adopted, but certain minor changes were made to meet local conditions. Dr. Reuben Peterson was elected president; Dr. Frederick R. Waldron, vice-president, and Dr. John W. Keating, secretary-treasurer, all of Ann Arbor.

Clarksdale and Six Counties (Miss.) Medical Association.

This association was organized Dec. 10, 1902, in conformity to the plan recommended by the American Medical Association and adopted the constitution and by-laws prepared by the committee of the American Medical Association. The association includes the following six counties: Tunica, Quitman, Coahoma, Sunflower, Tallahatchie and Bolivar. The territory covered by these counties is extremely thinly settled and a society in each county was considered impracticable for scientific work. Provision, however, is made for a vice-president in each county who will represent his county in a business way, etc. The following officers were elected: President, Dr. Morris J. Alexander, Tunica; a vice-president from each county; secretary, Dr. L. D. Harrison, Clarksdale, and treasurer, Dr. James W. Gray, Jr., Clarksdale.

Societies.

Medico-Surgical Society of Camden (N.J.).—At the annual meeting of this society Dr. Paul N. Litchfield was elected president; Dr. Alexander McAllister, vice-president; Dr. Clarence B. Donges, secretary, and Dr. Joel W. Fithian, treasurer.

Fort Wayne (Ind.) Academy of Medicine.—The academy held its annual meeting, Dec. 16, 1902, and elected Dr. Charles R. Dancer, president; Dr. Robert B. McKeeman, vice-president; Dr. J. Clifford Wallace, secretary, and Dr. Adam L. Schneider, treasurer.

Fort Dodge (Iowa) Physician's Club.—This club held its first regular meeting, Dec. 9, 1902, with 16 charter members, and elected Dr. Charles J. Saunders, president; Dr. Harley G. Ristine, vice-president, and Dr. James D. Lowry, secretary and treasurer.

Weber County (Utah) Medical Society.—At its annual meeting in Ogden, Dec. 10, 1902, Dr. Amasa S. Condon was elected president; Dr. Hammond J. Powers, vice-president; Dr. George A. Dickson, treasurer, and Dr. Harry B. Forbes, secretary, all of Ogden.

Cleveland (Ohio) Academy of Medicine.—The annual election of the academy, held Dec. 19, 1902, resulted as follows: Dr. Harris G. Sherman, president; Dr. William E. Lower, vice-president; Dr. Walter H. Merriam, secretary, and Dr. Oscar T. Thomas, treasurer.

Arizona Academy of Medicine.—The regular quarterly meeting of the academy was held in Phœnix. Dec. 20, 1902, of which Dr. E. Payne Palmer was elected president; Dr. W. M. Bell, vice-president, and Dr. W. H. Seton, secretary and treasurer, all of Phœnix.

Los Angeles County (Cal.), Medical Association.—At the annual meeting, Dec. 19, 1902, Dr. Rose Talbott Bullard was elected president; Dr. Fred. C. Shurtleff, vice-president; Dr. Charles G. Stivers, secretary; Dr. Kate Wilde, assistant secretary, and Dr. John C. Ferbert, treasurer, all of Los Angeles.

Montgomery County (Ohio) Medical Society.—At its annual meeting in Dayton, Dec. 5, 1902, this society elected the following officers for the ensuing year: President, Dr. John C. Reeve, Jr., Dayton; vice-president, Dr. Charles S. Judy, Miamisburg; secretary, Dr. Wilfred J. Taylor, Dayton; treasurer, Dr. David C. Lichliter, Dayton, and censor, Dr. Francis C. Gray, Dayton.

Camden District Medical Society.—This society has adopted a resolution recommending that the New Jersey State Board of Medical Examiners refuse to recognize the certificates granted by other states, except where New Jersey's certificates are recognized. This is in retaliation to the action of some surrounding states which fail to recognize the New Jersey Board's certificates.

Dodge County (Neb.) Medical Society.—At the annual meeting and banquet of this society, held in Fremont, December 11, Dr. Robert C. McDonald, Fremont, was elected president. The other officers elected were Drs. J. S. DeVries, Fontanelle, and Frank H. Brown, Fremont, vice-presidents; Dr. Andrew P. Overgaard, Fremont, secretary, and Dr. William J. Davies, Fremont, treasurer.

Atlanta (Ga.) Medical Library Association.—Drs. William S. Elkin, Virgil O. Hardon, E. Bates Block, Floyd W. McRae, Alexander W. Stirling and Michael Hoke filed a petition in the Superior Court, Dec. 19, 1902, asking to be incorporated under the name of the Atlanta Medical Library Association, whose purpose is the formation, establishment and maintenance of a library of medicine and the allied sciences.

The Tri-State Medical Association of Western Maryland, Western Pennsylvania and West Virginia.—This association met at Cumberland, Md., Dec. 11, 1902. There was a large attendance, and papers were read by Drs. J. Wesley Bovée, Washington, D. C.; Joseph C. Bloodgood, Baltimore; Benjamin M. Cromwell, Eckhart, Md.; Asa F. Speicher, Elk Lick, Pa.; S. A. Boucher, Barton, Md.; William F. Barclay, and Xavier O. Werder, Pittsburg, and John G. Clarke, Philadelphia.

Medical and Chirurgical Faculty of Maryland—Section on Clinical Medicine and Surgery.—At the meeting of this section, Dec. 5, 1902, Dr. Julius Friedenwald showed fragments of stomach tubes, which had become broken off in the stomach of two patients, necessitating operation for their removal. He stated that he had not found cases of gastrotomy performed for such cause, in the literature. Dr. Harvey Cushing, at the

same meeting, showed a patient who had had a gunshot wound destroying the facial nerve. He had anastomosed the distal end of the facial and the spinal accessory with the result of restoring the functions of the facial.

American Congress on Tuberculosis.—A petition was filed here, Dec. 18, 1902, in the Superior Court, Atlanta, Ga., asking for a charter for the incorporation of the American Congress on Tuberculosis. The incorporators are: Dr. George Brown, Atlanta; Dr. Henry D. Holton, Vermont; Dr. Daniel Lewis, New York; Dr. J. A. Egan, Illinois; Dr. Frank Paschal, Texas; Dr. Irving A. Watson, New Hampshire, and Drs. E. J. Barrack and P. H. Bryce, Canada. The purpose of the corporation is to promote discussion and devise means of bettering the condition of persons suffering with tubercular complaints. Another object is to assist in organizinz the World's Congress on Tuberculosis.

Philadelphia Hospital Association.—Twenty-five hospitals of the city recently united in this association. Dr. J. Vaughan Merrick was elected president. The association is advisory only, and its recommendations are to be submitted to the boards of managers of the hospitals represented for their rejection or adoption. The objects of the association are: To consider questions pertaining to hospital management; to discuss matters and methods that may increase the efficiency of hospital service; to consider possible abuses and methods to protect hospitals from imposition; to confer, when necessary, with state and municipal authorities; to devise methods for protection from contagious and infectious diseases, and to secure such comity and co-operation as may promote the best interest of all the hospitals in Philadelphia and the public good.

Southern California Medical Society.—The thirtieth regular semi-annual meeting of this society was held at Pasadena and Mount Lowe, Dec. 3 and 4, 1902, with the following officers: President, Dr. Fitch C. E. Mattison, Pasadena; vice-presidents, Drs. John C. King, Banning, and F. W. Thomas, Claremont; secretary and treasurer, Dr. Frank D. Bullard, Los Angeles. At the June meeting the question of forming a society in Southern California for the prevention of the spread of tuberculosis was discussed and a committee appointed to report a plan of organization. At this meeting the report of that committee was adopted and a temporary organization effected with Dr. Francis M. Pottenger, Los Angeles, as president, and Dr. Rose Talbott Bullard, Los Angeles, as secretary. The society will be called the Southern California Anti-Tuberculosis League.

WESTERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Twelfth Annual Meeting, held at St. Joseph, Mo., Dec. 29 and 30, 1902.

The President, Dr. James E. Moore, Minneapolis, in the Chair.

An address of welcome was delivered by Dr. J. Geiger, St. Joseph, and response was made by the president.

Evolution of the Treatment of Cancer of the Rectum.

DR. C. H. MAYO, Rochester, Minn., presented a paper on this subject. Certain definite results are desired in operations on rectal cancer, namely, permanent cure, low operative mortality and a controllable anus or its best substitute. These results are modified by location, stage of progress, and by the age and condition of the patient. Dr. Mayo gave a review of the operative treatment since 1870.

The modern surgical treatment is the block removal of the rectum, glands and gland tissue from below, in some cases, but more often by a combined abdominal and perineal method. Through an abdominal incision a low section of the sigmoid is made, this portion of the colon being saved as a fecal container, and the cut ends of the bowel inverted and closed by a circular suture, rendering the remainder of the operation aseptic. The rectum is separated laterally and below by a peritoneal incision and pushed down with the glands and fat by blunt dissection, the separation being carried as low as possible beneath the bladder, the remainder of its removal being completed through the perineum. The sigmoid is freed sufficiently to bring the cut end out of an inguinal McBurney muscle separation opening, the skin incision of which is one and one-half inches to one side, and to which the end of the sigmoid is sutured. The bowel is also sutured within the abdomen to prevent prolapse, and a pad compression of the skin-covered sigmoid loop gives a fairly controllable anus.

The main objections of the past, the author stated, are:

1. Ineffectual removal with local recurrence, so common in the perineal type.

2. The extensive mutilating character of the Kraske before operative conditions were known.

3. The frequent failure of all methods of union of proximal and distal portions of the bowel, which, when united with the destruction of the levator ani and internal sphincter, and anus saved, represented but one-third of the controlling apparatus of the bowel.

4. The frequent formation of stricture, either cicatricial or cancerous after operation, necessitating inguinal colostomy.

5. The loss of the fecal container in straightening the sigmoid.

Sentiment, and not chance, has proven the main reason for continuing to place an uncontrollable anus in an inaccessible situation. The gain in the combined operation has been in a selection of the operation to the case, radical removal *en masse*, with all glands, fat, and connective tissue, or colostomy for palliation; the retention of the sigmoid as a fecal container; the peculiar formation of the anus, giving a fair control in an accessible situation.

Carcinoma Uteri.

DR. H. C. CROWELL, Kansas City, Mo., read this paper.

Unless very early discovered, he believes that nothing is gained by hysterectomy for carcinoma of the cervix. Later operations may avail in carcinoma of the body of the uterus. The diagnosis should be confirmed by the microscope in the hands of a competent pathologist. The uterus must be freely movable, capable of being dragged down to the vulva. If not, it is probable that the disease has involved the utero-sacral ligaments and adjacent tissue, making an operation of doubtful utility. If the disease is clearly made out by touch, appearance, and clinical history, it is rarely possible to secure a radical cure by hysterectomy, if the fatal termination is not accelerated. In cases well advanced, his individual experience leads him to believe that more days or months, as the case may be, are added to the life of the patient than by any attempt at extirpation, by cutting and scraping away the necrotic tissue down to solid tissue, burning that surface with the thermocautery, and treating subsequently by touching the surface occasionally with 4 per cent. formalin. By this treatment disintegration is retarded, hemorrhage and discharges are checked, enabling the patient to recuperate sometimes to a remarkable degree. The suffering is lessened, and the patient is relieved of the shock and dangers attending more radical procedures. The essayist urged more frequent early examinations of parous women, who should be advised of the expediency of such examinations as a routine safeguard after the age of 36.

Discussion on Papers of Drs. Mayo and Crowell.

DR. M. L. HARRIS, Chicago, pointed out the necessity of making a laparotomy previous to the operation for rectal cancer if the disease extends high, and the surgeon is not perfectly sure that it is limited to the lower part of the bowel. This preliminary laparotomy should be for three purposes: (1) for examination, in order to determine whether or not the case is operable; (2) to facilitate operation, provided one is necessary; (3) to perform a colostomy if the case is inoperable. He thinks colostomy is an extremely valuable operative procedure in many cases.

DR. HENRY T. BYFORD, Chicago, thinks Dr. Crowell too pessimistic and narrated the case of a woman on whom he operated more than ten years ago, in which cancer had involved the entire cervix. The woman has not had a recurrence. He could report a number more that had recovered following operation.

DR. H. D. NILES, Salt Lake City, said that he recently had a case in which he was in doubt as to whether the stricture of the bowel was syphilitic or malignant. He used such measures as were available, and was still in doubt. He thinks in such a case it would be wise to do a colostomy, and at the same time explore parts of the bowel. An excellent result was obtained so far as the sphincter was concerned. The patient had excellent control of the bowels.

DR. A. C. BERNAYS, St. Louis, saw Dr. Mayo perform the operation described. It was a beautiful piece of surgery, and anyone who has seen this operation done will hereafter perform it in preference to any other.

DR. D. S. FAIRCHILD, Clinton, Iowa, is convinced that surgeons, after witnessing this method of operating, will conclude that it is the procedure which will be adopted hereafter.

Disarticulation of the Hip for Sarcoma of the Femur.

DR. A. E. HALSTEAD, Chicago, reported a case and remarked on the diagnosis and prognosis in sarcoma of the femur.

DISCUSSION.

DR. B. B. DAVIS, Omaha, called attention to elevation of temperature in these cases. Several years ago he had a case and his first diagnosis was osteomyelitis of chronic form rather than sarcoma, simply because of the temperature at the time, but he soon found out his mistake. In standard text-books he found no mention of elevation of temperature. This is a symptom to remember.

DR. JOHN P. LORD, Omaha, mentioned a case of carcinoma of the femoral neck following a fracture at that point from slight violence. While in fleshy individuals he thinks it would be impossible to differentiate this condition by ordinary manipulative methods, yet with the *x*-rays, in fractures from comparatively slight violence, the surgeon might suspect the condition and have an *x*-ray examination to determine the early existence of the disease.

DR. WILLIAM JEPSON, Sioux City, Iowa, mentioned 6 cases of sarcoma of the femur, 2 of which developed at the upper end of the femur, and were not subjected to operative intervention. In 4 the disease involved the lower end of the femur, 3 were subjected to amputation at the junction of the upper with the middle third; the other one was subjected to primary hip-joint amputation; 2 of the 3 were subjected to secondary disarticulation of the femur at the hip-joint. One of these 2 died; also 1 not subjected to this operation. Out of 6 cases there are only 2 living.

Oblique Inguinal Hernia.

DR. A. E. BENJAMIN, Minneapolis, said there were too many methods and a too large percentage of relapses and pointed out some of the causes of imperfect results. An operation that is not altogether new, but worthy of consideration, is as follows: The patient is prepared by having the parts shaved the morning of the operation. In doing so, infected areas or vesicles are avoided, which may result, when the shaving is done the previous evening or before the parts have been thoroughly cleansed. The time intervening between the previous evening and morning of the operation favors a greater multiplication of microorganisms. The bowels are emptied and subsequently kept free from gas accumulation, which lessens the internal pressure. An ordinary incision for a Bassini operation is made. The aponeurosis of the external oblique is slit up to a point opposite the internal ring. The fibers of the internal oblique and transversalis muscles are divided by blunt dissection, thus opening the inguinal canal. The internal oblique and transversalis muscles are found closely connected. They are not separated, but the aponeurosis of the external oblique is carefully and thoroughly removed from the internal oblique. The lower portion is dissected down to Poupart's ligament, and the transversalis separated from the peritoneum. Such careful dissection and positive identification of structures are an important aid in securing direct apposition and firm union. It corrects all defects of Nature in this region. The cord is now raised and silkworm-gut sutures introduced, passing through the skin, Poupart's ligament, internal oblique and transversalis. The loop is made on the lower side of the transversalis. The needle, re-entering the transversalis and internal oblique, passes through the skin to the outer and lower side of the cut near the point of entrance. From three to five sutures are similarly introduced. These sutures pull the internal oblique and transversalis below the shelving edge of Poupart's ligament, and are observed to make a firm barrier against any internal force. The sutures are then tied over rolls of sterilized gauze. The spermatic cord rests on the internal oblique. The external oblique is then closed over the cord. Interrupted figure-of-eight sutures are introduced, bringing the external oblique in apposition with Poupart's ligament. This also approximates the skin, and the sutures are tied over a roll of sterilized gauze. The sutures are usually left two weeks.

Appendicitis and Other Cases.

DR. W. W. GRANT, Denver, reported a case of rupture of gall-bladder or duct from vomiting, with rupture of the appendix in the same patient, and also reported two cases of appendicitis because of the interest connected with drainage and phagocytosis. He is satisfied that he has saved some patients after peritoneal extravasation by the liberal use of gauze for drainage. In abdominal operations drainage imperils the integrity of the abdominal wall, therefore predisposes to hernia. It should consequently be dispensed with as soon as possible. But in a justifiable belief in the efficacy of hyperleucocytosis, he believes it is not wise to hastily discard surgical procedures which have stood the test of abundant experience. Dr. Grant also reported a case of acute yellow atrophy of the liver.

Chronic Pancreatitis and Pancreatic Cyst.

DR. B. B. DAVIS, Omaha, reported a case of each of these affections and discussed the etiology and diagnosis of pancreatitis. Infection is considered the determining factor in most cases, being secondary to gallstones, cholecystitis, gastritis, duodenitis and zymotic diseases, particularly typhoid fever and influenza. Probably syphilis, alcoholism and general arteriosclerosis also cause a small percentage.

Glycosuria, fatty stools and muscle fibers in the stools, which theoretically ought to be diagnostic factors, in pancreatic disease, practically have usually been found absent. If glycosuria is present, destruction of the islands of Langerhans has been found to exist. In all cases in which infection is the causative factor, prolonged drainage of the gall-bladder was recommended.

DR. M. L. HARRIS, Chicago, emphasized the frequency with which stomach troubles precede chronic pancreatitis. It is possible that some stomach affections or ulcers of the duodenum are undoubtedly instances of chronic pancreatitis, and may be the result of infection.

Gunshot Wounds of the Stomach.

DR. J. W. ANDREWS, Mankato, Minn., reported a case and stated that since surgeons of international reputation do not agree as to an immediate operation, he prefers to do an immediate operation in all cases where it is reasonably certain that the stomach has been perforated.

Fowler's Position in Abdominal Surgery.

DR. VAN BUREN KNOTT, Sioux City, Iowa, had employed this position and reported five recoveries from diffuse septic peritonitis, no two of which occurred without an intervening failure. These are the only cases of diffuse septic peritonitis that have been operated on by the author successfully. The Fowler position was maintained for 24 hours, unless some special reason for continuing it was present. He says that the head of the bed should be raised from 18 to 20 inches from the floor. He hoped that those present, who had neglected to employ the Fowler position, would be induced to do so, for he believes that it can do no harm, and in many cases will prove of much value.

Old Irreducible Dislocations of the Shoulder Joint.

DR. A. F. JONAS, Omaha, reported seven cases in his own practice. His method consists chiefly in (1) manipulation, using the forearm as a lever, rotating outward and inward, abduction and adduction, never forgetting for a moment a possible accident to the axillary vessels and nerves, and the possibility of fracturing the humerus; (2) if this plan fails, the capsule is incised, and all cicatricial tissue is extirpated. All muscular attachments that offer restraint are severed, the axillary vessels are protected with a broad, flat retractor, and the head of the bone is brought into place by means of an elevator, assisted by manipulation and traction. To avoid infecting the wound, in this last maneuver it is advisable to firmly wrap the entire arm and hand with wet sublimate towels. Dry towels are liable to slip and become displaced, making it possible for the operator's hand to become infected. If the head can not be replaced, then (3) the head of the humerus should be resected, an operation to be avoided, when possible, on account of the

resultant flail-like condition of the arm, and yet must be done (*a*) when the humeral head and neck become too extensively stripped of their attachments, experience having shown that necrosis may occur in 16 per cent. of cases; (*b*) when osseous union has occurred between the head and the ribs; (*c*) when, after a division of all restraining soft parts, the head rests against the point of the acromion process.

DR. ALEXANDER H. FERGUSON, Chicago, reported a case of end-to-end anastomosis of the popliteal artery for gunshot injury.

Repair of Pelvic Injuries.

DR. WILLIAM E. GROUND, West Superior, Wis., contributed a paper on "Natural and Logical Treatment of Injuries of the Pelvic Floor Occurring During Parturition."

His conclusions were that almost every woman during her confinement suffers injuries from which she does not recover unless she is subjected to a secondary operation for repair; that immediate suture of apparent lacerations does not restore pelvic support in the vast majority of instances; that from one to two months after labor the woman should be subjected to a thorough examination and any relaxation corrected, before it has had time to impair her health.

Election of Officers.

The following officers were elected for the ensuing year: President, Dr. Alexander H. Ferguson, Chicago; vice-presidents, Drs. C. H. Wallace, St. Joseph, and C. W. Oviatt, Oshkosh, Wis.; secretary and treasurer, Dr. George H. Simmons, Chicago; members of the executive council: Dr. James E. Moore, Minneapolis, chairman; Drs. A. F. Jonas, Omaha; O. B. Campbell, St. Joseph; C. H. Mayo, Rochester, Minn., and J. R. Hollowbush, Rock Island, Ill.

Denver was selected as the place for holding the next annual meeting, Dec. 28 and 29, 1903.

(To be continued.)

AMERICAN ROENTGEN RAY SOCIETY.

Third Annual Meeting, held in Chicago, Dec. 10 and 11, 1902.

The President, Dr. G. P. Girdwood, Montreal, Can., in the Chair.

X-Ray Physics.

DR. T. PROCTOR HALL, Chicago, opened the program with a paper on the physics of the *x*-ray, which he concluded are electrical waves of some sort. He exhibited a new flouroscope which, in his estimation, is far superior to any other.

Equal Potential Surfaces in X-Ray Field.

DR. JOHN C. PITKIN, Buffalo, considered the principles and mechanics of static machines in general and exhibited an apparatus of his invention illustrating that many air gaps in simple series are superior to one long interval. This apparatus consists of a glass rod about one foot in length and one-half inch in diameter, on which are slipped a number of plain brass band rings, which are freely movable, to form the intervening air gaps. This apparatus greatly intensifies the *x*-rays. He suggested that in order to avoid distortion of the *x*-ray image the fluoroscope screen and the photographic surface should be made to conform to the shape of these equa-potential surfaces.

Presidential Address.

The president, Dr. Girdwood, in his annual address, reviewed the origin and development of electricity from the time of the early Greeks. He also considered the discovery of the Roentgen ray, the skiagram and the fluoroscope, and exhibited photographs made nearly thirty years ago when the skiagram was still exceedingly crude. The apparatus in use at that time was described in full. The nature and origin of the *x*-ray was also discussed in full as well as the value of the *x*-ray as a means of diagnosis and treatment. In closing, he called particular attention to the proper naming of these rays after their discoverer, Roentgen. All great discoveries in electricity had been named after the man who was instrumental in their discovery, and there is no reason why an exception should be made in this instance. They should be known as the Roentgen ray and not the *x*-ray.

Systematic Records and the Routine Use of the X-Rays.

MR. W. J. WILBERT, Philadelphia, described the methods used in the hospital with which he is connected in the capacity of radiographer. He called special attention to the necessity and value of the routine use of the ray for diagnostic purposes, because in many instances a seemingly correct diagnosis is seen to be wrong when a skiagram is at hand for confirmation of the clinical diagnosis. This is especially true in unsuspected cases of fracture about or in joints which are usually classed as sprains or contusions or nerve injuries. Many cases were cited in support of this contention.

Skiagraphy as an Art.

DR. J. RUDIS-JICINSKY, Cedar Rapids, Iowa, read this paper and described what is absolutely necessary in order to procure a good skiagraph, the principal thing being expertness on the part of the radiographer. The expert finds things which are entirely invisible to the novice. The correct reading or interpretation of the shadows in a skiagram is by no means an easy task. He favors rapid exposures with a high current.

Results and Technic in Treating Epithelioma.

DR. EMIL H. GRUBBE, Chicago, in this paper, strongly objected to the indiscriminate use of the high and low tubes in tumors. The method is inexact and positively harmful. A tube with a vacuum just high enough to penetrate the tissues to be exposed should always be used. Inflammation of either the deep or surrounding superficial tissues should be avoided. Either the static machine or the induction coil may be used. When the static machine is used it is advisable to use at least two series of spark gaps between the machine and the tube. When the coil is used connection may be made to the tube without the use of a spark gap in series. The principal thing is to maintain a constant vacuum in the tube. The controlling factors in this method are the quality of the tube, distance of the tube from the parts to be treated, the time of exposure, frequency of exposure and exciting apparatus. The time of exposure depends on the intensity of the *x*-ray. Treatments should be given daily, with exposures of ten minutes, the tube being placed from four to six inches from the part, until a reaction ensues in the shape of redness, heat and itching. The treatments are then discontinued for from two to seven days, after which the patient is again exposed in the same manner as before and to the same rays. All parts not under treatment are protected by a mask of thin sheet lead. The occurrence of a dermatitis does not retard the progress of the cure; in fact, it may be taken as an indication that the treatment is beginning to be effectual. Proper general or systemic treatment should also be used in conjunction with the rays.

The author details a large number of cases so treated and tabulates the result. Good results were obtained in the majority of the cases, the result always varying with the location of the disease. The average duration of all treatments was four months. Some were symptomatically cured in as short a time as one month.

When the disease is situated in an accessible part of the body the chances of recovery are manifestly greater than when the location is inaccessible as the part can be brought more readily under the influence of the rays. The results obtained were of such a nature as could not have been obtained by any other method of treatment. The writer does not claim to have brought about an absolute cure, but only a symptomatic cure. He states rather positively, however, that in all complicated cases of superficial epithelioma, where the treatment was begun early, the results have been such as to warrant the use of the word "cured" in its fullest sense. In incurable cases the *x*-ray is as nearly a specific as any therapeutic agent in use to-day.

DISCUSSION.

DR. CLARENCE E. SKINNER, New Haven, Conn., did not agree with Dr. Grubbe that it was necessary to produce a dermatitis in order to get the best results from the use of the *x*-ray, although in the majority of the cases the production of some dermatitis hastens the cure.

This was also the opinion of several others who participated in the discussion. All favored a slight tanning or browning of the skin, but not actual burning.

DR. E. J. BROWN, Decatur, Ill., believes in producing a dermatitis, but finds that it is much easier to produce a burn and much harder to cure one on the body than on the face. He advocated giving the treatment in relays, as it hastens the cure and also permits of a control of the degree of a burn. The *x*-ray gives a better functional result and cosmetic effect than surgery.

The Roentgen Ray as a Therapeutic Force, from a Clinical Standpoint, with Illustrative Cases.

DR. J. B. MURPHY, Chicago, said that in the fracture element of surgery the *x*-ray is of enormous benefit, although it is liable to err. It is also of great assistance in the diagnosis of tubercular affections of the joints in differentiating whether the lesion is one of the bone or of the synovial membranes, thus materially facilitating the method of treatment and the subsequent result. The *x*-ray is further valuable in these cases as a therapeutic agent, producing remarkably good results, and in an incredibly short time. He also cited a number of cases of tuberculosis of the spine in which the *x*-ray was used for its therapeutic effect. A cure resulted in each case, in one after twenty-five applications, in another after twenty-one. A third was very much improved after twenty-three applications. He called attention to the difficulty of correctly diagnosing the presence of renal calculi with the *x*-ray. It is often deceptive, showing stones when they are not there, and not showing them when they are there. Repeated skiagraphs should be made, and always in two directions. Deep-seated tumors, as of the intestinal tract, were not affected in his experience. In intestinal and tubercular fistulas the sinuses close up promptly after only a few applications of the ray.

DISCUSSION.

DR. J. P. MARSH, Troy, N. Y., called attention to frequent blood examination for prognosis. He finds that if the leucocytes increase in number the outcome will be a favorable one, and *vice versa*.

DR. CLARENCE E. SKINNER, New Haven, Conn., said that there is considerable difference in the way in which these growths respond to the influence of the *x*-ray. He suggested that perhaps it might be called an idiosyncrasy.

Others who discussed the subject were: Drs. Gibson, Birmingham, Ala.; Dunham, Cincinnati; Edwards, Nashville, Tenn., and Pennington, Chicago.

DR. G. P. GIRDWOOD, Montreal, Can., contributed a paper describing cases of cancer, tuberculosis and rodent ulcer with the rays.

The Technic of Treatment of Malignant Growths.

DR. J. N. SCOTT, Kansas City, Mo., read this paper. He insists that the apparatus used should be powerful enough to excite the largest tube to its fullest capacity and permit of a complete control of the current. He believes that the results in malignant growths are better when the cases are treated every day. The ray should never be employed strong enough to produce a necrosis of the tissues. He begins with an exposure of four minutes and gradually increases to eight minutes when a reaction usually appears. The time of exposure is then diminished, followed by another gradual ascent until the period of reaction. This method is pursued until a satisfactory result is obtained. The growth should always be exposed from as many directions as possible.

The general condition of the patient should be carefully watched and all the functions, especially those of elimination, kept active. Dr. Scott is convinced that the Roentgen ray will cure a certain percentage of cases of malignant tumor and improve nearly all more or less. The *x*-ray is far superior to the knife in that the original tumor, as well as the metastatic growths, can be treated at the same time, thus preventing any further spread. It is also applicable where the knife is not. A special apparatus is described, devised by the author, for the purpose of preventing the possibility of producing a burn on other parts of the body, and also to protect the hands and eyes of the operator, which is a very important matter. The apparatus consists of a metal box which is perforated by openings through which the rays pass and through which the operator can also regulate his apparatus without exposing either himself or his patient. Since he has used this box he has no trouble whatever with burns of unaffected parts of the body.

DISCUSSION.

DR. GORDON C. BURDICK, Chicago, does not believe that the normal tissue should be protected in a case of carcinoma, except when the tumor involves any part of the face. In body tumors the tumor tissue will break down long before the healthy tissue.

DR. LESTER E. CUSTER, Dayton, Ohio, exhibited a screen of his invention, containing a central opening adjustable in size by a series of diaphragms. It is mounted like a music stand and is freely movable in every direction for use on any part of the body to protect the healthy tissue. It also protects the operator. The screen is made of block tin, but any kind of metal can be used. It may be packed in a small space and is easily and rapidly set up.

Election of Officers.

The following officers were elected for the ensuing year: President, Dr. Arthur Goodspeed, Philadelphia; vice-presidents, Drs. John B. Murphy, Chicago, and Wm. Jordan Taylor, Cincinnati, Ohio; secretary, Dr. J. B. Bullitt, Louisville, Ky.; treasurer, Dr. Weston A. Price, Cleveland, Ohio; member of the executive committee, Dr. Ralph R. Campbell, Chicago. The next place of meeting will be determined by the executive committee.

(To be continued.)

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Prevention of Mammary Abscess.

Dr. Alfred C. King, in *N. Y. Med. Jour.*, states, in the prevention of mammary abscess, that the treatment should really begin during the latter months of pregnancy by manipulating and drawing out the nipples and bathing them in alcohol or borax water to harden the epithelium. Absolute cleanliness is requisite; frequent washing of the nipples with soap and water, followed by a saturated solution of boric acid, keeping gauze pads saturated with this solution wrapped around the nipples during the day and sterilized vaselin applied during the night. As an application also, the author recommends the following combination:

R.	Tannici (glycerite)	℥ii	8
	Alcoholis	℥i	30
	Aquæ rosæ q. s. ad	℥iii	90

M. Sig.: To be applied constantly on sterile gauze.

For the pain give opium or codein or morphin hypodermatically if the pain is unbearable, and apply lead and opium wash locally. Saline cathartics lessen the hyperemia of the breasts. Belladonna ointment applied locally often affords comfort. Ice bags are of great importance and should be employed in order to prevent pus formation. Support by bandages is necessary, employing the figure-of-eight in combination with the "straight around" bandage, making gentle compression as well as support. Bacon's method of massage may be employed by beginning in the axilla and rubbing under the clavicle, gently at first and gradually increasing the pressure. The stroking is all directed away from the breast and not toward it. The purpose is to facilitate the flow of the blood and lymph back from the breast and to accelerate the flow in the efferent vessels.

Potassium Chlorate in Habitual Abortion.

Dr. S. Remy, in *Merck's Archives*, recommends the use of potassium chlorate, given internally, in cases of habitual abortion in young women, which is not dependent on epidemic disease, on syphilis, or on lesions within the uterus. As soon as the patient is certain she is pregnant, she is given daily grains 3 (gm. .20) of potassium chlorate and the medication is con-

tinued during the entire period of gestation. The dose is decreased to grains 2½ (.15) during the last few weeks. The author succeeded in a number of cases which previously had had several miscarriages. He believes that the nascent oxygen liberated acts on the elements of the uterine mucous membrane in the process of evolution and gives them increased vitality.

Burns.

F. Tichy, according to an abstract in *N. Y. Med. Jour.*, recommends calcium hypochlorite as an antiseptic for burns. He applies a cool bandage with an antiseptic oil on the first day, which he finds causes the vesicles to form quickly, which he opens after twenty-four hours under antiseptic precautions. He then applies compresses steeped in the following solution:

℞ Calcii hypochloriti .....gr. xxxvi-lxxv 2.75-5
Aquæ destil. .....℥xxxv 1080
Dissolve, filter and add:
Camphoræ .....m. lxxv 5
M. Sig.: Apply locally.

The compresses should be renewed after twenty-four hours, but kept moist by pouring on fresh solution during that time. It is of importance to keep the compresses on as long as possible and to keep them constantly damp. Great care must be exercised in removing the old compresses not to disturb the scabs under which the wound is to heal.

Salicylic Acid for Soft Chancre.

The following is recommended by *N. Y. Med. Jour.* in the treatment of soft chancre:

℞ Acidi salicylici .....gr. xxiv 1 | 65
Tinct. benzoini 3ss 2
Petrolati .....℥i 30
M. Sig.: Apply locally night and morning.

Infantile Eczema.

A. Ravogli, in *Cin. Lancet-Clinic*, recommends the following treatment of eczema of infants: The patient should have plenty of water, and if necessary to further stimulate the kidneys 10 to 20 grains of potassium citrate may be added to the water daily. The elimination by the bowels must be given attention. For this purpose small doses of calomel, magnesium citrate, sodium phosphate, cascara or castor oil may be given. In cases of diarrhea, salol and sodium bicarbonate, two grains of each may be given three times a day. In poorly-nourished children tonics, iron and cod liver oil are of use. Arsenic is of no benefit in eczema.

In an acute eczema bran or starch water or a mild solution of sodium bicarbonate should be used for bathing instead of soap and water. The clothing should not be so excessive as to keep the child constantly in perspiration. The local treatment must be governed by the stage of the disease. Dusting powders like zinc oxid, bismuth or rice powder and boric acid should be employed in the acute form when it is of an erythematous nature located around the genitals and in the folds of the skin. In the acute form, with deep excoriations, accompanied by abundant serous discharge and severe itching, the use of ichthyol in the form of a liniment as follows is of great value:

℞ Ichthyol 3ii 8
Olei amygdalæ dulc.
Aq. calcis, āā 3iv 16
Aq. rosæ
Glycerini, āā .....℥i 30
M. Fiat linimentum. Sig.: To be applied on strips of lint saturated with the liniment. According to the author, ichthyol cornifies the epidermic cells of the corpus mucosum and forms a temporary protection to the papillary layer. The surface of the skin should be washed with a 1 per cent. solution of carbolic acid or sodium borate before the liniment is reapplied.

In cases of acute eczema the following is recommended as a sedative lotion:

℞ Pulv. calamin prep.
Zinci oxidi, āā 3ii 8
Glycerini
Aquæ rosæ, āā .....℥iss 45
M. Sig.: Apply locally to the affected surfaces with a camel's hair brush or on pieces of lint.

In order to maintain the remedies on the scalp it is necessary to cut a mask which may be fastened to a skull cap and bound to the head. Resorcin should be employed when there is a marked seborrheic condition of the scalp and face. It may be applied in the form of an ointment as follows:

℞ Resorcin .....gr. x | 65
Ung. aq. rosæ .....℥i 30
M. Sig.: Apply locally; or:
℞ Resorcin .....gr. xv 1 |
Acidi salicylici .....gr. vi | 20
Vaselini flavi .....℥i 30
M. Sig.: Apply locally.

The foregoing cleanses the surface, diminishes the exudation and secretion of the sebaceous matter. As a continuation of the treatment pastes such as Lassar's may be applied to protect the parts:

℞ Acidi salicylici .....gr. x | 65
Zinci oxidi 3ii 8
Amyli 3ii 8
Vaselini .....℥i 30
M. Sig.: Apply locally.

In eczema, accompanied by prurigo, sulphur mixed with the foregoing paste gives good results. In cases of pustular eczema of the scalp a salve containing white precipitate, likewise produces good results:

℞ Hydrarg. precip. albi .....gr. x | 65
Zinci oxidi
Bismuthi subcarb. 3ss 2
Acidi carbol. .....gtt. x | 65
Vaselini flavi .....℥i 30
M. Sig.: Apply locally.

When the inflammation has subsided and the epidermis is reforming and the exudation has been reduced the application of a combination containing tar is of service:

℞ Ung. picis liq. 3iii 12
Zinci oxid. 3iss 6
Ung. aq. rosæ 3vi 24
M. Sig.: Apply locally.

Where it is difficult to keep the mask and ointment on the face, the Pick paste may be applied.

℞ Zinci oxidi 3ii 8
Pulv. tragacanthæ 3i 4
Glycerini 3iss 6
Aq. rosæ .....℥iv 120
M. Sig.: Apply locally.

Carbolic acid or tar may be substituted in proper proportions for the zinc oxid. When the eczema has healed up but the skin is tender and easily cracks and itches the following should be applied:

℞ Acidi carbol. 3i 4
Glycerini 3i 4
Aq. rosæ
Alcoholis, āā 3iii 12
M. Sig.: Rub on the skin with absorbent cotton and then dry and dust with rice powder.

Capillary Bronchitis in Children.

The prognosis of capillary bronchitis is dependent to a great extent on the age and state of nutrition of the patient. In children under twenty months it is more grave and may terminate fatally within twenty-four or thirty-six hours. To control the temperature tepid sponging or bathing should be resorted to. Warm mustard baths serve two purposes in this disease: first, to reduce the temperature, and secondly, to modify the state of congestion of the pulmonary circuit by dilating the peripheral capillary vessels. The strength of the mustard bath should be one tablespoonful of mustard to the gallon of water. The bath may be repeated every three or four hours if necessary. It has been recommended to put one tablespoonful of mustard in a quart or half gallon of water and, wringing a towel from this solution, wrap the infant in the towel and allow it to remain there for ten or twenty minutes, when the skin will become reddened. Mustard paste applied to the anterior portions of the chest or posteriorly over the base of the lungs is of undoubted value in relieving the congestion and lessening the

difficulty of respiration to some extent. The paste should be made up from one part of mustard to six of flour, and in older infants a comparatively stronger paste may be used. The elimination, respirations and heart's action must be carefully watched and the presence or absence of cyanosis observed. There is, however, great danger in over-stimulation in these cases in the anxiety to relieve the dyspnea.

Small doses of spirits of nitrous ether repeated four or five times in the twenty-four hours are of service in increasing the renal elimination. To support the respirations small doses of spiritus frumenti or strychnin may be employed, depending on the rapidity of the respirations and the heart's action. For a child of fifteen or twenty months the dose of strychnia should range from gr. 1/300 (.0002) to gr. 1/200 (.0003), given every four hours.

In order to render the mucous secretion in the capillary bronchi less viscid and thus aid the little patient to clear the finer air-passages and at the same time to lower the temperature by increasing elimination, the following combination may be given:

℞.	Ammon. carb.	gr. viiss-xv	30-1.
	Liq. ammon. acetatis	ʒi 30	
	Aq. destil. q. s.	ʒii 60	

M. Sig.: One teaspoonful every four hours, alternating with the strychnia.

An emetic is sometimes given to advantage when the infant is unable to raise the mucus.

Small doses of calomel should be given in divided doses at the beginning of the attack.

Medicolegal.

County Physician Refusing to Act in Epidemic—Expense.—The Minnesota statutes provide that, on the breaking out of epidemics of contagious and infectious diseases, the constituted authorities, who are present and have notices thereof, have power to act, and that all necessary expense incurred by any board of health in the general control of contagious and infectious diseases within any town, village, or city shall be a charge in favor of such town, village, or city against the county in which the same is situated. The Supreme Court of Minnesota holds, in the case of the City of Mankato vs. Blue Earth County, that the health officer of a municipality is justified in incurring the expense of furnishing medical treatment for the purpose of controlling a contagious disease, when the county physician, whose duty it is, refuses to treat the infected persons, and such expense may be recovered against the county. It says, that it was suggested in this case that it was not in the power of the county physician to refuse; that he should have been compelled to perform his duty, or, if he would not, then application should have been made to the county commissioners to secure the requisite services. But the court does not think that the statute justifies such construction. It says that it is the evident intent and spirit of the whole law to provide a speedy method of controlling and stamping out such diseases, and, although it was made the duty of the county physician to perform such services, it would be unreasonable to require the public to undergo the delay and suspense attendant on securing another representative of the county in the manner suggested. It must be assumed that, for the purpose of caring for people afflicted in such a manner, the county physician is the duly accredited representative of the county, and a refusal on his part to perform the services was ample justification for the health board to take the matter in their own hands, and furnish the medical attendance necessary to control and eliminate the infection. No distinction can be drawn between expenses incurred in removing the patients into quarantine, furnishing them shelter and necessary supplies for their comfort, and the expense of medical attendance, for such services are required not only to allay the sufferings of patients, but also to control the epidemic. Furthermore, the county is liable, the court holds, for the necessary additional salary paid the local health inspector for extra services in locating and combating contagious diseases.

Mental Healing Under the Postal Laws on Fraud.—The case of the American School of Magnetic Healing and another vs. McAnnulty, to enjoin the latter, as postmaster at Nevada, Mo., from carrying out a fraud order of the postmaster-general to withhold their mail, was tried on demurrer, that is, admitting all material facts in the bill of complaint, and denying that under them the complainants were entitled to any relief. It was therefore admitted that the business of the complainants was founded "almost exclusively on the physical and practical proposition that the mind of the human race is largely responsible for its ills, and is a perceptible factor in the treating, curing, benefiting, and remedying thereof, and that the human race does possess the innate power, through proper exercise of the faculty of the brain and mind, to largely control and remedy the ills that humanity is heir to, and complainants discard and eliminate from their treatment what is commonly known as divine healing and Christian science, and they are confined to practical scientific treatment, emanating from the source aforesaid." Can such a business be properly pronounced a fraud within the statutes of the United States? The Supreme Court of the United States answers that there can be no doubt that the influence of the mind upon the physical condition of the body is very powerful, and that a hopeful mental state goes far, in many cases, not only to alleviate, but even to aid very largely in the cure of an illness from which the body may suffer. And it is said that Nature may itself, frequently, if not generally, heal the ills of the body without recourse to medicine, and that it can not be doubted that in numerous cases Nature, when left to itself, does succeed in curing many bodily ills. How far these claims are borne out by actual experience may be matter of opinion. Just exactly to what extent the mental condition affects the body, no one can accurately and definitely say. One person may believe it of far greater efficacy than another, but surely it can not be said that it is a fraud for one person to contend that the mind has an effect on the body and its physical condition greater than even a vast majority of intelligent people might be willing to admit or believe. Even intelligent people may and indeed do differ among themselves as to the extent of this mental effect. Because the complainants might or did claim to be able to effect cures by reason of working on and affecting the mental powers of the individual, and directing them towards the accomplishment of a cure of the disease under which he might be suffering, who can say that it is a fraud, or a false pretense or promise within the meaning of these statutes? How can any one lay down the limit and say beyond that there are fraud and false pretenses? The claim of the ability to cure may be vastly greater than most men would be ready to admit, and yet those who might deny the existence or virtue of the remedy would only differ in opinion from those who assert it. There is no exact standard of absolute truth by which to prove the assertion false and a fraud. We mean by that to say that the claim of complainants can not be the subject of proof as of an ordinary fact; it can not be proved as a fact to be a fraud, or false pretense or promise, nor can it properly be said that those who assume to heal bodily ills or infirmities by a resort to this method of cure are guilty of obtaining money under false pretenses, such as are intended in the statutes, which evidently do not assume to deal with mere matters of opinion on subjects which are not capable of proof as to their falsity. We may not believe in the efficacy of the treatment to the extent claimed by complainants, and we may have no sympathy with them in such claims, and yet their effectiveness is but matter of opinion in any court. The bill in this case avers that those who have business with complainants are satisfied with their method of treatment, and are entirely willing that the money they sent should be delivered to the complainants. In other words, they seem to have faith in the efficacy of the complainants' treatment, and in their ability to heal as claimed by them. If they fail, the answer might be that all human means of treatment are also liable to fail, and will necessarily fail when the appointed time arrives. There is no claim that the treatment by the complainants will always succeed. To further illustrate what it means, the Supreme Court refers to the difference of opinion as to the value of electricity in treating disease, of

vaccination as a preventive of smallpox, and of homeopathic treatment. Both the homeopathic and what is called the "old school," it says, have their followers, and many who believe in the one will pronounce the other wholly devoid of merit. But there is no precise standard by which to measure the claims of either, for people do recover who are treated according to the one or the other school. And so, it is said, do people recover who are treated under this mental theory. By reason of it? That can not be averred as a matter of fact. Many think they do. Others are of the contrary opinion. Is the postmaster-general to decide the question under these statutes? The court holds not. As the effectiveness of almost any particular method of treatment of disease is, to a more or less extent, a fruitful source of difference of opinion, even though the great majority may be of one way of thinking, the efficacy of any special method, it declares, is certainly not a matter for the decision of the postmaster-general, within these statutes relative to fraud. Unless the question may be reduced to one of fact, as distinguished from mere opinion, these statutes can not be invoked for the purpose of stopping the delivery of mail matter. And in this case, it simply holds that the admitted facts showed no violation of these statutes. Its instructions to overrule the demurrer are coupled with others that it be with leave to answer, and to take such further proceedings as may be proper and not inconsistent with this opinion. In overruling the demurrer, it adds, it does not mean to preclude the postmaster from showing on the trial, if he can, that the business of the complainants, as in fact conducted, amounts to a violation of the statutes as herein construed.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

December 27, 1902.

1 *The Diagnosis of Cancer of the Stomach. William F. Cheney.
2 *Lumbar Puncture as a Curative Agent in Meningitis, with Report of a Case. S. Ormond Goldan.
3 *An Autopsy Four Hours Postpartum on a Subject on Whom Ventral Hysteropexy Had Been Done Four Years Previously. Byron Robinson.
4 *Hydrops Tubæ Profluens, with Report of Cases. F. Hurst Maier.
5 A Case of Corrosive Sublimate Poisoning from a Vaginal Douche. Horatio C. Wood, Jr.
6 A Case of Herpes Zoster Ophthalmicus Complicated by Oculomotor Palsy. William Zentmayer.

1. **Cancer of the Stomach.**—Cheney notes the symptoms of gastric cancer, and says that where there is no tumor the difficulty may be much greater and the diagnosis of Bright's disease and pernicious anemia may require careful study, but it is in these cases that cure by operation is the most possible.

2. **Lumbar Puncture.**—Goldan reports a case of meningitis in a child, accompanied with convulsions and marked swelling of the fontanelle. Lumbar puncture was made with the idea of relieving the pressure and with strikingly good immediate results. He thinks that lumbar puncture with aseptic precautions is devoid of any risk, and while valuable from a diagnostic point of view, may be also curative in certain cases.

3. **Ventral Hysteropexy.**—In the case reported by Robinson death was caused by invagination of the postpartum uterus, due to ventral hysteropexy performed four years previous. The direct cause was atrophy of the fundus due to dragging of the peritoneal band on the fundus. The direct cause of death was heart shock, which he explains by the effect of trauma on the heart through the hypogastric and ovarian plexuses, solar plexus, and splanchnics to the cervical ganglia. He concludes that ventral hysteropexy should not be performed on women in the reproductive period.

4. **Hydrops Tubae Profluens.**—Two cases are reported by Maier, who remarks that the pathology is the same as that of ordinary hydrosalpinx, differing only in the fact that the occlusion is mechanical and finally gives way to pressure. He notices the theory of Menge and Döderlein that it is due to mild streptococcic infection of puerperal origin and with the possibility also of gonorrheal infection.

Medical Record, New York.

December 27, 1902.

7 *On Some of My Principles in Orthopedic Surgery. Adolf Lorenz.
8 *What Can Be Done to Prevent the Spread of Syphilis. E. Harrison Griffin.
9 *X-Light in Therapeutics. Clarence E. Skinner.
10 *Typhoid Gangrene. Charles E. Nammack.
11 *The Etiology of Relapse in Typhoid Fever. H. N. Rafferty.
12 *Pasteurized and Sterilized Milk as a Cause of Rickets and Scurvy. E. M. Sill.

7. **Orthopedic Surgery.**—Lorenz gives the following principles as guiding him in his operations: 1. Avoidance of even the possibility of putting the life of the patient in danger. For this reason he generally prefers the bloodless operations, and osteoclasis to osteotomy. 2. The so-called central correction of deformities, which means that every deformity should be corrected in the vertex of its angle. If one prefers to correct the deformity in one of the sides of the angle, the deformity itself would remain, and instead of correction we would have only a compensation. 3. Another important principle is that of absolutely saving the bones by dividing the soft parts as far as circumstances may demand it. This condemns all cuneiform osteotomies and resections *en bloc* of bone, and substitutes for them simple linear osteotomy. 4. In tuberculous disease of the joint in children, he rather favors expectant treatment. He has never made a resection of a tuberculous joint; the results of conservative treatment seem to him far the best. In hip-joint disease he aims to procure a solid ankylosis; experience has taught him that great mobility and bad function with lack of endurance are common allies. He makes little of permanent extension, and considers it only a matter of fixation, proclaiming that every articulation attacked by chronic disease should not be prevented from function any longer than absolutely necessary.

8. **Syphilis.**—Griffin notices the causes which he has observed, and, aside from the sexual causes, he mentions drinking fountains, and suggests that public drinking fountains be supplied with a cone-shaped cup without a base, which should be kept inverted over the water jet and thus constantly rinsed. He notices also the common prevalence of buccal syphilis, and the habit that the victims have of picking the sores on their mouths and leaving the virus on whatever they handle, door-knobs, glasses, etc. Laundresses are liable to acquire the disease, and he notices especially cases among nurses, midwives, etc. He thinks syphilis should be a notifiable disease, and the victims placed under surveyance. He lays down certain hygienic rules, including all the precautions against the spread of the disease, the prohibition of alcoholic drinks and of marriage for three years.

9. **The X-Light.**—From an analysis of published cases and from his own observations, Skinner concludes: 1. That the pain in deep-seated cancer is removable by the *x*-light to an extent ranging from slight amelioration to entire disappearance in a large proportion of cases, whereby the patient is enabled to spend what remnant of life is left him in comfort and free from the effects of the continuous use of opium. 2. In many cases the *x*-light is capable of exercising an influence on deep-seated cancer of sufficient intensity to markedly retard the progress, prolonging life where it can not be ultimately preserved. 3. In a proportion of cases it possesses the power to entirely overcome deep-seated malignant processes, restoring the patient to apparent health. 4. A small number of deep-seated malignant growths seem insusceptible to the *x*-light. 5. The phenomena consisting of chills, rise of temperature, etc., indicating systemic toxemia, not infrequently accompany the development or liberation of a toxin probably dependent on retrogressive metamorphosis occurring in the tissues which have become too deeply involved to be susceptible to regeneration. This auto-infection is capable of overwhelming the patient, hence it is desirable to suspend treatment temporarily when this systemic toxin first appears, and allow the system to rid itself of the noxious accumulation before further use of the rays. He believes his experience, in connection with the uniformly gratifying results met by nearly everyone in superficial growths, leads to the conclusions: 1. That a greater pro-

portion of cures can be obtained by this than any other method, possibly excepting the mercuric cataphoresis of Massey. 2. That in all cases of cancer where it is advisable to use the knife, the influence of the *x*-light in antagonizing cancerous degeneration may be looked on as indicating its application for a time immediately succeeding the operation in all cases and also in some cases preceding it. 3. That the *x*-ray is indicated in all inoperable cases because it has been successful in some and improved others, and, 4, lastly, it is the only measure that offers anything whatever of hope for ultimate recovery. He remarks on the possibility of *x*-ray lesions and the methods of producing the rays. He prefers the static machine exclusively for internal cancers, and the coil or static machine indifferently for superficial ones. Therapeutic applications of the *x*-ray should be entrusted, he thinks, only to the experienced operator, as the difference between efficient and faulty technic will determine the success or failure.

10. **Typhoid Gangrene.**—This condition, due to obstruction of the circulation from altered blood, weakened heart and mechanical embarrassments and local diffusion of bacteria, is observed in four different forms: 1, arterial thrombosis of cardiac origin; 2, autochthonous thrombi in the arteries; 3, autochthonous thrombi in the veins, and 4, thrombi in the small peripheral vessels. In the case here reported the gangrene affected both the lower extremities simultaneously, and the diagnosis was arterial thrombi of atheromatous origin, involving the aorta at its bifurcation.

11. **Typhoid Fever.**—The object of Rafferty's article is to point out the possibility of a large percentage of relapses in typhoid being due to gall bladder and liver colonization by the germs, subsequently reinfecting the duodenum and lower bowel by the bacilli-laden bile. He reports a case illustrating these views, and quotes authorities and gives references.

12. **Infantile Scurvy.**—Sill has observed 179 consecutive cases of infants fed with pasteurized and sterilized milk, and found in 97 per cent. of them unmistakable signs of rickets and scurvy, least marked in those cases where the feeding was supplemented with a small proportion of breast feeding. He thinks cow's milk is not bettered by sterilization or pasteurization for children. The better plan would be to thoroughly study the source and be able to exclude the possibility of disease. Sterilized or pasteurized milk, he says, is to the infant what canned or salt food is to the sailor.

Medical News, New York.

December 27, 1902.

13 *Recent Advances in Electrotherapeutics. William J. Morton.
14 Imitation, Suggestion and Social Excitements. John B. Huber.
15 *Cutaneous Angiomata and Their Significance in the Diagnosis of Malignant Disease: A Statistical Study Based on the Observation of Nearly 400 Cases. Douglas Symmers.
16 *The Rapid Microscopical Diagnosis of Fresh Tissue; with Special Reference to Staining. F. T. Billings.
17 *Indications for the Performance of the Mastoid Operation. William C. Braislin.

13. **Electrotherapeutics.**—Aside from the older methods of franklinization which still have their value, Morton includes among the recent advances in electrotherapeutics: 1. The static induced current; 2, the wave current (a phase of the static induced); 3, the Tesla transformer of the static induced; 4, the D'Arsonval transformer of the static induced; 5, the Oudin resonator. The first, the static induced, is local and direct in its application, and reaches a far greater extent of tissue, owing to its potential and consequently diffuse power, than the galvanic and faradic currents. The second is almost entirely general, but may be either local or general, and the same applies to the transformed currents of Tesla and D'Arsonval. The Oudin resonator enormously increases the difference of potential of high frequency currents, and in itself creates a new field of application of high tension electricity, especially in local treatments and reactions. He mentions the methods of administering these currents, the use of the brush discharge, etc., and the vacuum or Geissler tube, also the remarkable effects of actinic rays.

15. **Cutaneous Angiomata.**—Symmers has investigated some 373 cases for angiomata and finds them increasingly present up to an advanced age, the percentage being greatest between 70 and 80 years, his results in this respect agreeing closely with the statistics of Raff. He has also studies 17 cancer cases which were available, in which there was no question in the diagnosis as to their relationship with angiomata. He found angiomata present in 13 cases, absent in 4, but in no case were they present in noticeably large numbers nor did they seem to bear any special relationship to cancer. He discusses the literature and concludes that skin angiomata bear no relationship to malignant disease, and that their existence, even in large numbers, is to be viewed without any degree of alarm so far as cancer is concerned. They are a frequent, practically an invariable, concomitant of decay of advanced years, and in both young and old are probably significant of some form of well-marked arterial degeneration. He remarks in a note that Rosenbaum has recently published a series of 400 observations, the results of which and the author's conclusions are essentially identical with those given in this paper.

16. **Fresh Tissue Section.**—Billings describes the methods employed for cutting and preparing fresh tissue sections. He finds hematein the best stain for nuclei, which is usually used in the form of hemalaun after P. Meyer's formula modified by Pick. It is prepared as follows: (*a*) Hematein, 1 gm., alcohol 90 per cent., 50 c.c.; heated over water bath. (*b*) Powdered alum, 50 gms., water, distilled, 1000 c.c.; heated over water bath, alum dissolved. The two solutions are poured together and allowed to cool. This is best after standing for some time; Pick leaves it untouched for six months. The different steps of hardening and staining are given as follows: 1, fresh specimen set on freezing stage, frozen and cut; 2, sections wiped off knife and placed in water; 3, alcohol, 50 per cent., two minutes; 4, alcohol, 95 per cent., three minutes; 5, hemalaun, three minutes; 6, wash in water; 7, alcoholic solution of eosin, 30 seconds; 8, alcohol, 80 per cent., three minutes; 10, carboxylol, two or three minutes; 11, mount in Canada balsam. The whole process, cutting included, should not take over twenty-five minutes. The result, as a rule, is entirely satisfactory. The results are certainly as good for all practical purposes as the prolonged hardening and embedding in paraffin or collodion, which are difficult and expensive.

17. **The Mastoid Operation.**—Braislin says the symptoms of greatest significance in leading one to undertake immediate operation are:

1. Pain continuous and severe, making sleep impossible, and radiating upward along the side of the head to the vertex, backward to the occiput, or more rarely, forward to the frontal region. 2. The temperature, even in children, does not often keep at a high point after the first days of acute illness, but is often markedly irregular. 3. A falling of the posterior superior wall of the external auditory canal. This is caused by edema of the periosteum and tissues over the mastoid cells or may be due to the actual burrowing of pus. It is possible to mistake this condition for furuncle of the canal and *vice versa*. 4. Tenderness over the mastoid is the rule in cases calling for operation, but there are exceptions. Other severe symptoms may be present pointing to perforation of the tegmen tympani.

Some operators go to the extreme of believing that an exploratory mastoidectomy is justifiable at any time, but Braislin thinks that many of these cases would recover without operation and conservatism would be preferred by most of us as applied to our own mastoids. He thinks it is proper to operate on cases in the quiescent chronic state to prevent destructive processes and further serious consequences. Stacke's operation can often be done in this condition with benefit, and with a shorter convalescence, but the lack of pain or serious subjective symptoms often prevents permission to operate.

New York Medical Journal.

December 27, 1902.

18 *The Operative Treatment of Deformed Fractures as Indicated by the Roentgen Rays. Carl Beck.
19 Retrocecal Abscess Developing Three Years After Removal of the Appendix. Thomas S. Cullen.
20 *Personal Experience with McGraw's Method of Gastroenterostomy. Samuel Lloyd.

18. **Deformed Fractures.**—Beck's paper is fully illustrated with skiagrams showing the deformities that may exist after fractures, and illustrating his methods of their repair. He remarks that until the Roentgen rays made the diagnosis of

these deformities possible and the outlining of operative measures, indifference in regard to these cases was more justifiable. He also remarks on the necessity of fixation and the occasional advantage of wiring, though he avoids this whenever possible. If it is done he leaves the ends out, enclosed in iodoform gauze. Screws, clamps, etc., should only be resorted to under extreme conditions. The fragments of the bone in their normal position may require more or less extensive chiseling or sometimes excision of the parts of the bone. Involvement of the nerves may be suspected whenever there is intense pain or numbness in the range of their course. In fractures of the lower half of the humerus or the upper end of the fibula, the possibility of nerve interposition should never be lost sight of. The *x*-rays give us no information as to this particular point. He remarks that, of course, such deformities as are here represented should not occur at all, and it would be a most desirable thing if they were always due to the patient's own neglect and disobeying of orders.

20.—See abstract in THE JOURNAL, XXXIX, p. 1409.

Philadelphia Medical Journal.

December 27, 1902.

21 *Influenza and the Nervous System. Smith E. Jelliffe.
22 *A Case of Acute Intestinal Obstruction Caused by a Gallstone: Necrosis of the Bowel; Operation; Death. J. A. Scott.
23 *The Surgical Treatment of the Enlarged Prostate. George E. Armstrong.
24 *Sore Throat. B. F. Randolph Clark.
25 *Neurasthenia. T. W. Keown.

21. **Influenza and the Nervous System.**—The history of the present epidemic of influenza in its effects on the prevalence of nervous disease, insanity, etc., is noticed by Jelliffe. He quotes from various authorities as to the increase of psychic disorders, especially the exhaustive types, and calls attention to the affinities with neurasthenia. The popular diagnosis of influenza is often erroneous. The clinical symptoms may be similar in the ordinary colds and conditions which have an entirely different bacteriology, and the necessity of bacteriologic examination and diagnosis is mentioned. The increase of suicide within the influenzal decade of 1890 to 1900 is also particularly remarked on. In conclusion he says that although the mortality of influenza and its collateral affections falls short of that recorded in the great epidemic, the situation is still a serious one, and he advises as to prophylactic measures. It is not advisable to visit persons sick with influenzal disease, but if it is necessary it is best to avoid any unnecessary contact and use disinfectants, washes, etc., and the airing of garments and exposure to the direct rays of the sun afterward. Those who are exposed to the infection should watch their general health and avoid any indulgence in alcohol. With the initial symptoms, the patient should go to bed and call for a physician. The complications are too serious to allow of risk. After the disease has passed, all articles used in the sickroom should be disinfected. These, he says, may seem to be unnecessary precautions, but the disease is so infectious and its consequences so far reaching that it is wise to take the risk seriously.

22. **Gallstones.**—The title of Scott's article gives the main facts. He concludes it with a general discussion of obstruction of the bowels, with special reference to the possibility of gallstone complications.

23. **Surgery of the Prostate.**—Armstrong formerly used the operation of suprapubic prostatectomy, but not with very successful results, and therefore gave it up, nor did he have much better success with Dittel's perineal operation when he employed that. It then occurred to him that in view of the favorable statistics of Bottini's method, that still better results would follow a more thorough and systematic use of the cautery and that through a suprapubic cystotomy wound the prostate could be thoroughly exposed and the cautery applied directly to the point where it could do the most good. He put this idea into practice in the spring of 1900, and reports seven cases. He claims for the method a great degree of safety; the cautery applied directly to the prostate, the parts and instrument being in full view, is a safe operation and can be recommended with confidence. The operator can recognize just how far the prostate extends into the bladder and which lobes require treatment, and demonstrate the condition of the bladder wall and remove any stone that is present. As much tissue as is desired can be removed and a cicatrix is left which, in healing, undergoes the inevitable contraction and opens and lowers the internal orifice of the urethra and tends to raise the floor of the bladder. Hemorrhage can be effectually controlled. Up to the present he has endeavored to close the bladder after operation, but his experience has led him to the plan of leaving it closed excepting for a drainage tube, which can be removed after the charred tissue has passed away, and any possible obstruction of the urethral orifice is out of the question. The bladder wound will close very quickly after the tube is removed. He notices in conclusion Bouffleur's article in the *Annals of Surgery* for July, where he recommends a very similar operation. He would go further than Bouffleur, however, and remove all the projecting parts of the prostate.

24. **Sore Throat.**—Clark's paper is a review of the different forms of sore throat, anginas, ulcerations, abscesses, tonsillitis, catarrhal pharyngitis, mycosis, quinsy, syphilitic sore throat, traumatic conditions, etc. The pain attending laryngeal troubles is usually described as sore throat. The treatment of the different forms is described.

25. **Neurasthenia.**—This is a general discussion of the subject. Keown calls attention to gastric disturbances as having much to do with the condition in some cases through autointoxication, and he is inclined to credit the sympathetic system as the principal nerve apparatus concerned in this disease. It is an irregular vasomotor control, which he thinks has much to do with the production of the symptoms.

Boston Medical and Surgical Journal.

December 25, 1902.

26 *On the Teaching of Physical Diagnosis. William S. Thayer.
27 *Two Cases of So-called Landry's Paralysis: Autopsies. E. W. Taylor and G. A. Waterman.
28 *Obstetrical Antisepsis. Warren R. Gilman.
29 *Errors in the Estimation of Urea by the Hypobromite Method. Elliott P. Joslin.

26. **The Teaching of Physical Diagnosis.**—Thayer's article is a full exposition of his ideas in regard to this department of medical teaching, and he emphasizes the following points: 1. An essential part of the teaching of physical diagnosis consists in the demonstration of those points in regional anatomy, an accurate knowledge of which is necessary to the diagnostician. Such demonstration should be accompanied by exercises in the application of the fundamental methods of physical examination to the normal individual. 2. The student should learn, so far as possible, by actual observation and practice, the physical causes for the signs to be noted on inspection and palpation and elicited by auscultation and percussion of the normal subject; without this a proper understanding of the pathologic signs and deviations is impossible. 3. A thorough training in pathologic anatomy is essential and frequent demonstrations in the necropsy room of the lesions which the student is meeting in the living individual form an important part of the course. 4. The study of physical diagnosis should be approached without preconceived ideas beyond those acquired in the normal individual, and books should not be allowed to be consulted until the student has learned to detect in the living subject the more important manifestations if disease. Acquiring first ideas from text-books is apt to produce bad habits which may affect his diagnostic abilities later. 5. To thus properly train the student requires that the class be divided into small sections, so that each man may personally test each observation. 6. As a part of the course the student should have a fair experience in the examination of patients as they come to the out-patient clinic in order that he may acquire the skill in taking histories, in the practice of topographic percussion, and in the habit of forming an independent diagnosis. This should be under the direct supervision of the instructor. 7. No man is properly fitted to begin the practice of medicine who has not had a reasonable amount of actual bedside experience of the more important diseases he has to meet. This can be done by: 1, insisting that the student shall have several months' experience as a clinical clerk in the hospital wards; 2, by providing for daily or frequently repeated ward visits with an instructor for at least an equal length of time. This is in no way detrimental

to the interests of the patients or the institution. A great deal, of course, depends on the instructor. The teacher must be enthusiastic and absorbed in his subject, and be able to communicate these qualities to his students.

27. **Landry's Paralysis.**—After reporting two cases in which the postmortem revealed nothing adequate to account for the symptoms, Taylor and Waterman discuss the propriety of the name "Landry's paralysis," which they think is perhaps still justifiable for such cases where after adequate study no anatomic changes are found postmortem.

28. **Obstetric Antisepsis.**—Gilman's article is a full and detailed general review of the antiseptic measures that should be employed in obstetric practice.

29. **Urea Estimation.**—Joslin points out that the hypobromite method for estimating urea is not safe clinically when ammonia, acetone and *b*-oxybutyric acid and ammonia are present in the urine. Other bodies like creatinin, uric acid and urates also interfere with the test, but to a less extent. Since acetone, *b*-oxybutyric acid and ammonia are chiefly found in diabetic patients, it is a good rule to scrutinize carefully reports of large quantities of urea in this disease, since if these are present, the estimation is untrustworthy if the hypobromite method is employed. The simplest method to enable us to judge of the presence of these substances is the ferric chlorid test for diacetic acid and when this is positive, acetone and *b*-oxybutyric acid are always present, and an excess of ammonia is probable.

Cincinnati Lancet-Clinic.

December 27, 1902.

30 Tuberculosis—Sanitation. H. H. Spiers.
31 Surgery of Prostate, Pancreas and Diaphragm. (Continued.) B. Merrill Ricketts.

Medical Age, Detroit, Mich.

December 10, 1902.

32 *A Contribution to the Study of Herpes Progenitalis. Noah E. Aronstam.
33 *The Hydrotherapeutic Treatment of Typhoid Fever. Henry B. Favill.

32. **Herpes Progenitalis.**—This condition is described by Aronstam, who attributes it to a peripheral neuritis or local vasomotor paralysis as its chief underlying pathologic state. He notes also its occurrence in the later secondary stage of syphilis, but is not prepared to say in what relation the two disorders stand to each other. It may also, according to reports, be associated with tuberculosis, and various local conditions may also be causal factors. The indications of treatment are to remove the cause and treat any existing systemic disorder; observe strict cleanliness of the parts; use protectives to exclude any irritation or infection of the lesions. If the latter has occurred in spite of all efforts against it, treat the resulting ulcer antiseptically. He advises for protective applications, powders of bismuth and boric acid with aristol, or zinc oxid and bismuth with europhen, first applying a little glycerin to ensure their adhesion.

33. **Typhoid Fever.**—Favill describes the bath treatment of typhoid, using the bed bath. The patient can be kept in the tub for varying periods. It looks, he says, like maltreatment, the patient shivers, complains, and looks blue, but when once taken out and rolled in blankets he immediately goes to sleep, and sometimes continues sleeping for hours. This kind of a bath can be given in any house where there is a person who can devote his attention to the patient. The reduction of temperature is not the special point and sponging and packing are not adequate substitutes.

Virginia Medical Semi-Monthly, Richmond.

December 12, 1902.

34 *Some Phases of Albuminuria. William S. Gordon.
35 *Severe Heart Depression After Use of (Small) Immunizing Doses of Diphtheria Antitoxin. Lewis Holladay.
36 Cretinism, with Report of Case and Treatment. S. T. A. Kent.
37 Case of Xeroderma Pigmentosum. Lewis Wheat.
38 Primary Intrinsic Sarcoma of the Larynx. William F. Mercer.
39 Three Cases of Appendicitis. T. M. Baird.
40 A Plea for the More Frequent Use of Accouchement Force. Christopher Tompkins.

34. **Albuminuria.**—A number of cases of transient albuminuria are reported by Gordon, in all of which the morbid product disappeared under proper treatment, and they illustrate what may be variously termed physiologic, cyclic, intermittent, periodic, and functional albuminuria. He discusses them and says that if transient albuminuria is not to be regarded as a normal occurrence, it should be considered simply as an indication of disordered health due to temporary crippling of the physiologic processes of the body. He is inclined to think that many of the cases are indications of uric acidemia or some gastrointestinal disorder.

35. **Diphtheria Antitoxin.**—Holladay reports the case of a young man aged 26 years who took a prophylactic dose of 500 units and went into a condition of profound cardiac depression and syncope. He was revived with nitroglycerin, strychnin and digitalis, followed by mustard poultices, together with the continuance of nitroglycerin, and it was half an hour before any pulsation could be felt in the radial arteries. A sensation of painful constriction of the chest-impeding respiration was present for a much longer time. Holladay had used an equal quantity on himself without ill effects, and he thinks the occurrence points to an idiosyncrasy to antitoxin in this case and suggests caution in the use of this powerful prophylactic and curative agent.

American Journal of the Medical Sciences, Philadelphia.

December, 1902.

41 *The Treatment of Pleurisy with Effusion. Francis Delafield.
42 *Pancreatic Lithiasis, with Report of a Case. Francis P. Kinnicutt.
43 *Wolff's Law and the Functional Pathogenesis of Deformity. Albert H. Freiberg.
44 *A Discussion of Wolff's Law. R. Tunstall Taylor.
45 *The Surgical Treatment of Cirrhosis of the Liver, with a Summary of Reported Cases. Robert B. Greenough.
46 Autopsy in a Case of Adiposis Dolorosa. F. X. Dercum and D. J. McCarthy.
47 Diphtheria with Persistent Trismus and Opisthotonos—Escherich's Pseudo-Tetanus. Irving M. Snow.
48 Tuberculosis of the Parotid Gland; Excision of the Tumor; Recovery. No Recurrence One Year and More After the Operation. Charles L. Scudder.
49 *The Present Status of Serum Therapy. Frederick A. Packard and Robert N. Willson.
50 Some Observations upon Delusions, Impulsive Insanity and Moral Idiocy. Bernard Oettinger.

41. **Pleurisy.**—Delafield has come to the conclusion that aspiration is the only treatment for pleurisy with effusion. He tabulates 200 ordinary hospital cases occurring in the years 1886 to 1901, with results. None of the patients died, none of them were injured by the operation, and in none of them was the chest infected. Of 200 cases 182 left the hospital entirely cured; 6 left the hospital within ten days after the aspiration, and probably recovered; 6 left at periods from 17 to 36 days, the pleurisy was better, but the results were uncertain; and 6 left the hospital at the end of from 24 to 38 days, not at all improved. In more than one-half of the cases the duration of the pleurisy before aspiration was between 10 and 30 days. In all the inflammation had been kept up and the patients had not been at all improved either by Nature or by the different medicines which they had taken. The operation was done once in 142 cases, twice in 45, three times in 9 cases, and four times in 4 cases, and the length of time intervening between aspiration and entire recovery ranged from one week to six, a larger number taking a longer time. In private practice he says the results are generally better than in hospitals.

42. **Pancreatic Lithiasis.**—The literature of this condition contains six cases where a positive diagnosis of pancreatic lithiasis was made or suspected during life. Abstracts of these and of a case of his own are given by Kinnicutt. He remarks, in conclusion, on the difference from cholelithiasis, and says none of the subjective symptoms, such as nausea, vomiting, diarrhea, etc., can be regarded as characteristic. The belief that a ptyalism of varying degree accompanies a deficient secretion of the pancreatic juice, either through occlusion of the ducts or disease of the gland, is not borne out by clinical experience. The pain probably differs neither in kind nor location from that of cholelithiasis. The presence of an unusual number of undigested striated muscle fibers in the stools can not be regarded as a basis for positive diagnosis, but its presence is suggestive. The decisive evidence of the existence of pancreatic lithiasis is the recovery of the characteristic concretions from the stools, and is exceedingly rare. If the other

symptoms fail to furnish evidence singly, their various combinations may be suggestive. Attacks of epigastric colic of an obscure nature, with or without jaundice, associated with a large number of muscle fibers in the stools, accompanied or followed by glycosuria, should be regarded as a reasonable basis for a diagnosis of pancreatic lithiasis.

43. **Wolff's Law.**—Wolff's law is translated by Freiberg as follows:

Every change in the form and function of the bones, or of their function alone, is followed by certain definite changes in their internal architecture and equally definite secondary alterations of their external conformation, in accordance with mathematical laws.

He discusses its applicability, having studied the bony structure of various animals, including the primates, and also pathologic cases. He says in conclusion that from all the researches of Wolff, Zschokke, Schmidt and others, as well as from observations herewith presented, it is believed justifiable to conclude as follows:

1. The strictly mathematical concept of Wolff's law has not yet been justified by demonstration. 2. Save in their mathematical aspects the statements of Wolff's law and its corollaries may be accepted as being in agreement with observations hitherto made. 3. If we accept the foregoing statements it does not follow that we must make use of the so-called "functional methods" in our therapeutic endeavors; they are to be chosen not from theoretical considerations only, but for reasons of expediency and practicability.

44. **Wolff's Law.**—Taylor discusses the same subject, concluding that we must all fully concur with Wolff that pressure does not produce atrophy in bone as Lorenz has claimed, and that functional transformation of bone must and does occur to meet the altered static demands of pressure, tension and shearing strain. He is not, however, prepared to admit that we can attribute all deformities to function alone, regardless of superincumbent weight. He supports his views by illustrations of deformities following mal-union, Pott's disease, etc.

45. **Talma's Operation.**—From a view of the facts ascertained and a study of the cases reported, Greenough concludes that the condition known as biliary cirrhosis with enlarged liver, jaundice and fever and without ascites, is accompanied in a certain proportion of cases by infection of the bile ducts. The drainage of the bile ducts by cholecystostomy is a proper operation when such evidence of infection is present, and symptomatic treatment has failed to relieve. Of 105 cases of liver cirrhosis which presented the symptoms of ascites, 42 per cent. were improved and 59 per cent. not improved by Talma's operation or one of its modifications. The mortality within thirty days was 29.5 per cent. Nine cases were improved in health two years after the operation, these presenting no marked differences in general character from the others. Cases where the liver was enlarged gave a lower mortality and a higher percentage of improvement than cases of atrophic liver. Cases of suture of the omentum between the layers of the abdominal wall gave a lower mortality and a slightly higher percentage of improvement than cases where only peritoneal surfaces were brought in contact. Drainage increases the danger of sepsis and peritonitis and should be avoided. Tapping may be done, if necessary, after the operation. The presence of adhesions and perihepatitis is of good prognostic import as regards the success of the operation, while the number of tappings before operation and the presence of edema of the feet and legs are of less prognostic importance than the general condition of the patient, the size of the liver and the functional activity of the liver cells. Talma's operation or one of its modifications is of proved benefit in a certain limited number of cases of liver cirrhosis, primarily for the relief of ascites, and secondarily for the relief of other symptoms of portal congestion. The dangers attending the operation are mainly due to the weakened resistance of the patient, rather than to the operation itself. More judgment should be exercised than has hitherto been the case in the selection of cases. The operation is not indicated in ascites due to other causes and is contraindicated in the presence of renal or cardiac disease, and when evidence does not exist that sufficient functional liver tissue remains to maintain life. It is also contraindicated when complications exist sufficient in themselves to make the results of operation uncertain. The paper concludes with a summary of cases and bibliography.

49. **Serumtherapy.**—Packard and Wilson describe the theory of immunity and serumtherapy, defining the terms lateral-chain theory, complements, immune bodies, haptophore, toxophore, etc., and discuss the investigations that have been made. The principal purpose of their paper is to review the clinical evidence for and against the efficacy of sera in different diseases where they have been employed. The value of antidiphtheria serum is an established fact. The antitetanus serum, they conclude, is a valuable means of treatment, though by no means curative in all cases. It is only by a consideration of a large number of cases that its real value is discovered and its influence appears to be appreciable mostly in cases of subacute and chronic type, the mortality in the acute cases being less affected, though there has been a real reduction even there. Until very recently the development of a typhoid antitoxin seems to be even less encouraging than that of the antitetanus serum, but it now seems to promise significant help in the treatment of the disease; not only treatment of the disease itself with curative serum, but preventive inoculation has proved of value. The antistreptococcus serum, the authors conclude, will at least do no harm, and where special streptococci are involved alone, will eliminate the micro-organism, and control the symptoms unless used too late. When the streptococcus occurs in combination with other micro-organisms it has no effect, except so far as the streptococci are concerned. The antipneumococcus serum seems to be of less substantiated value, but we have apparently better results with the more active sera used in larger doses. Antiplague serum has yielded important and favorable results that have not been appreciated in this part of the world, and has a positive value in the treatment when properly employed, but the extent of its value is still an unsettled one. The serum treatment of tuberculosis, they conclude, is an adjuvant which if used early may result in cure, and when used late may retard the process and promote healing. The promise for it is good when we learn more definitely just where it can be employed with benefit. Other serums known are the antivenene, which seems to be of value, more particularly against certain forms of snake venom. Its action is directed against the nervous rather than the irritating and tissue-destroying principle in the venom. Anticholera, antidysentery serum, and the antitoxin of scarlet fever are also noticed. There seems to be as yet nothing that will touch malaria, but there have been some good results in such diseases as syphilis, whooping cough, erysipelas, anthrax, scarlatina, etc. In conclusion they refer to Emmerich and Low's "immunizing and curative proteidin," but say that no comment can be made at this time on the value of the product. The paper concludes with an extensive bibliography.

Annals of Gynecology and Pediatry, Boston.

December, 1902.

51 *Polyhydramnios; Its Differential Diagnosis and Treatment, with the Report of Cases. Edward P. Davis.
52 Appendicitis. John Bruce Harvie.
53 *Medical Gynecology. John H. Fuller.
54 A Case of Absence of the Uterus and Ovaries. Antonio Bustillo-Lirola.

51. **Polyhydramnios.**—Polyhydramnios is understood as the condition in which more than two pints of amniotic liquid existed at full term. The pathology is not fully known. The placenta is often large, dropsical, infiltrated, the umbilical vessels are often enlarged, and the amnion and chorion may be thickened with extensive fissures in the epithelial layer of the amnion and fatty degeneration of the cells. Any fetal condition leading to venous engorgement tends to produce polyhydramnios, and the irritating substances formed in the lymphatics may cause this condition. Excessive secretion from the cerebrospinal canal of the fetus may contribute to polyhydramnios. It does not follow increased renal action of the fetal kidneys. Davis thinks that further knowledge regarding the osmotic properties of maternal and fetal blood and of liquor amnii may be obtained through cryoscopy. The diagnosis is made by first diagnosing the pregnancy, but it may complicate ectopic pregnancy. In ovarian cyst the illness is longer and swelling at first unilateral; the uterus is but little enlarged. In ascites the dulness changes when the position of

the patient is altered. The diagnosis must be made further from hydatid mole, plural pregnancy, etc. All may mislead, but hydatid mole is accompanied with a pear-shaped uterus with little fluctuation, and there is blood discharged. In exceptional cases, ovarian cyst complicating pregnancy may be difficult to diagnosticate and exploratory incision may be necessary. The absence of tension on the membranes and of shortening of the cervix should be noted. Treatment by drugs is useless. If distension increases too rapidly and health is impaired, the cervix should be dilated under antisepsis, the membrane ruptured and fluid allowed to escape very gradually until the presenting part descends firmly against the cervix. Firm pressure must be made over the abdomen by a broad bandage and the patient watched, as labor is often precipitate and presentation unfavorable. Labor should not be hurried in the interests of the child because the fetus is often deformed, and there is increased danger of sepsis and hemorrhage to the mother. The uterus should be completely emptied and made to contract, and the hypodermic use of strychnia and ergot and other stimulation are necessary, while a hot 1 per cent. douche of lysol and tamponing with iodoform gauze may be required.

53. **Medical Gynecology.**—Fuller reviews the symptoms associated with pelvic disease. Nervousness is often relieved by sudorifics, and is often connected with weak heart and relieved by proper tonics. The headaches may depend on various causes, constipation, lacerated perineum, cardiac weakness, stomach disorders, etc., all of which can be relieved. Backache is another symptom. This, if dorsal, depends most on the stomach and the liver; if sacral, on the pelvic organs; if lumbar, on the bowels and kidneys. The respiratory disorders like chronic rhinitis and pharyngitis are those produced by imperfect excretion and a brisk purge will relieve them. The "winter cough" of gynecologic patients is often relieved by treatment of the kidneys, being due, he thinks, to renal insufficiency. Autointoxication from the digestive tract is also mentioned. The reabsorbed, resecreted and re-excreted bile carries an immense amount of excreted matter through the liver. Too great abundance of uric acid, leading to nervous and artheromatous symptoms is to be considered by the gynecologist, and renal insufficiency is often of more importance than the metritis or menstrual derangement, as many pelvic troubles run back to this causation. Fuller remarks that surgical technic is taught in all its refinement, but the symptomatology, differential diagnosis and medical part of gynecology does not receive adequate attention.

New York State Journal of Medicine, New York.

December, 1902.

55 *The Newer Relation of the Pancreas to General Medicine. Alfred Stengel.
56 *Surgery of the Stomach for the Relief of Non-Malignant Pathological Conditions. A. J. Ochsner.
57 *Pneumonia, from the Bacteriological Standpoint. A. C. Abbott.

55. **The Pancreas in General Medicine.**—Stengel's article reviews the more recent acquisitions to our knowledge in regard to the pancreas in health and disease with special reference to the diagnosis of its morbid conditions. He considers fatty diarrhea an important symptom in connection with others, especially when there is no jaundice, but its absence is less significant. The pancreas is not essential to fat absorption though an important organ for this function. The finding of muscle fibers in the stools is of comparatively little value by itself, but has considerable significance if bile secretion is normal and gastrointestinal disease can be excluded. The relation of the pancreas to glycosuria is discussed at length by the author, especially the relation of the islands of Langerhans; the recent researches on this point are noticed, especially those of Opie. He says, while the results of recent studies tend to more and more magnify the importance of the pancreas in diabetes, it can not be said that it always plays a part. Special points in the diagnosis are noticed at length: emaciation, fatty diarrhea, lipemia and lipuria, sialorrhea, which is not very frequent and less significant in pancreatic than gastric disease, the subjective symptoms of pain and its character, glycosuria, etc.

56.—See abstract in THE JOURNAL, xxxix, p. 1205.

57.—Ibid.

Fort Wayne Medical Journal-Magazine.

November, 1902.

58 *The Pretubercular State—Some of Its Etiologic Factors. A. P. Buchman.
59 The Lesson of Virchow's Life. James J. Walsh.

58. **The Pretubercular State.**—Buchman sums up his ideas by saying that every case of tuberculosis, no matter where located, has a clearly-defined pretubercular state of considerable duration, and that the conditions which initiate this are in positive relationship with tuberculosis. That the primary and sole cause of the pretubercular state is: 1, an excess of carbon in the system, and 2, unelaborated food particles floating in the general circulation. That a properly and scientifically regulated dietary will, in a large proportion of cases, entirely cure the condition, hence the importance of the dietary in the prophylaxis of tuberculosis.

St. Louis Courier of Medicine.

December, 1902.

60 *An Infectious Form of an Eczematoid Dermatitis. Martin F. Engman.
61 *Concerning Antipyresis in Children. E. W. Saunders.
62 *The Etiology of the Summer Diarrhea of Infants. John Zahorsky.
63 *Bacillus Dysenteriæ. Carl Fisch.
64 *The Cecum: In Relation to the Psoas Muscle in 310 Adult Male and 125 Adult Female Autopsies. (Concluded.) Byron Robinson.

60. **Eczematoid Dermatitis.**—Engman describes and illustrates this condition and reports cases. He finds it generally starts from a trauma or infection, often after surgery or an accidental wound. The similarity between this rapidly-spreading condition and Crocker's dermatitis repens is at once obvious. Its infectiousness was beautifully illustrated among the babies at the Bethesda Foundlings' Home during the summer of 1900. The pure impetigo type is far more infectious and more prevalent than the dermatitis. The infection is usually staphylococcal. According to his studies pure cultures of yellow or white staphylococci, or both, can be obtained from the contents of the initial vesicles, serous or seropurulent discharge, crusts and denuded surfaces of the skin. When the apparently-healthy skin of a person suffering from eczematoid dermatitis is slightly irritated after sterilization, and inoculated with the discharge, the flora and symptoms of the original from which the inoculation was taken are reproduced. Inoculation experiments from individual to individual have not been encouraging, probably on account of the patients' unwillingness. Inoculations from artificial cultures on individuals were not very successful. Engman thinks the organism must undergo some change in its chemotactic character in artificial media. The suppuration so often associated always contains staphylococci, and all these facts together confirm his belief in the staphylococcic origin of the disorder.

61. **Antipyresis in Children.**—The urgency of antipyresis depends on the concomitant symptoms, and not on the height of the mercury alone, but Saunders thinks that even moderate temperature in comparatively mild disease should not be entirely disregarded if suffering is caused. Hydrotherapy takes first place in its relief, but in many cases it is advantageous to combine the external and internal antipyretics. This combined method is not sufficiently employed. He does not object to the use of coal-tar products, if given occasionally with full recognition of the fact that they are depressing in their action. They are contra-indicated wherever the heart is liable to fail, as in diphtheria and pneumonia, though in the early stages of scarlet fever and other exanthemata they are not harmful, and the relief they afford will generally justify their use. In influenza some cardiac stimulation should be added. He calls attention to the value of pilocarpin as an eliminant and antipyretic in diphtheria and scarlet fever. In pneumonia, veratrum viride is the safest antipyretic and its general neglect is undeserved. The external application of guaiacol is another antipyretic; just how it acts is still unsettled. He has found it exceedingly valuable in infants and children, for in pneumonia many cases do not bear cold baths well, and then the external application of this drug is indicated. In typhoid fever and especially in tuberculosis there should be no hesitation in its use. With care there is little danger of its producing depression. In some cases one drop is sufficient, in others several are required.

Hydrotherapy should be employed with judgment in its application. Some children take the full bath nicely, and others become very chilly and do not react promptly. For general use the wet pack is most likely to agree.

62. **Summer Diarrhea.**—From a recent study of the disorder in the Bethesda Foundlings' Home, Zahorsky found the Gruber-Widal reaction in a large proportion of cases and the *Bacillus dysenteriæ* was obtained. There will be little doubt, he thinks, that the epidemic depended on this bacillus, and he believes that while we can not exclude other germs this must be considered the probable etiologic micro-organism.

63. **Bacillus Dysenteriae.**—Fisch thinks it is too early to form conclusions as regards Duval and Bassett's discovery, but seemingly there is a relation of the bacillus to a great number of intestinal infections of infants. In Zahorsky's studies the number of positive reactions was rather puzzling, and in a few tests of the blood from healthy infants the results were always negative. He thinks that under the head of summer complaint a number of etiologically different conditions are gathered, but that Duval and Bassett have succeeded in clearing up a part of the question.

64. **The Cecum.**—This number contains only the conclusions of Robinson's article; they are too long to be reproduced. The reader is referred to the original.

Kansas City Medical Index-Lancet.

December, 1902.

65 *Suspension in Tabes Dorsalis. Harold N. Moyer.
66 *Plastic Surgery in Ophthalmology. Flavel B. Tiffany.
67 *Septicemia and the Curette. H. Plympton.

65. **Suspension in Tabes.**—Moyer concludes that suspension is not a cure but a valuable aid in tabes. It is useful in about 30 per cent. of cases. Rapidly progressing or stationary cases are least benefited; those of moderate severity where the disease is largely confined to the lumbar enlargement, receive the most benefit. If the cervical enlargement is most involved, little can be expected from this measure. The method should be adopted with care, and the effect of each suspension be closely observed.

66. **Plastic Surgery in Ophthalmology.**—Tiffany reports cases of operations on the eyelids for trichiasis, entropion, etc.; gives illustrations and calls special attention to the operation of skin grafting for the restoration of the destroyed lid, and the operation for congenital ptosis.

67.—See editorial in THE JOURNAL, xxxix, p. 1327.

International Journal of Surgery, New York.

December, 1902.

68 *The General Consideration of Surgical Patients. A. J. Ochsner.
69 Surgical Treatment of Strangulated Inguinal Hernia. W. B. DeGarmo.
70 Nose and Throat Work for the General Practitioner. George L. Richards.
71 The Surgical Assistant. Walter M. Brickner.
72 A New Method of Preventing Shock, Nausea and Thirst After Operations. T. J. Biggs.

68. **Surgical Patients.**—The points made by Ochsner in his general consideration of surgical cases are the avoidance of unnecessary operations, and the necessity of careful examination without, however, too great insistence on positive diagnosis, when it may require operative measures that might be dangerous. He thinks that the exploratory examination of malignant tumors is sometimes overdone. He also protests against any kind of diagnostic massage or pressure on suspicious growths as likely to do damage, also against too much faith in the exploratory needle and the syringe since they are unreliable. In considering the patient in regard to the advisability of an operation, a number of things must be taken into account. Old age is not of itself a contraindication, though elderly patients do not bear the loss of blood so well. Old people generally bear surgical operations well if they are allowed to move about and sit up early after the operation. He thinks it may not be bad even in apparently serious operations, such as removal of the breast, to allow the patient to sit up the next day. Obesity is a point that requires consideration, but seldom entirely contraindicates operation. Tuberculosis is not a contraindication to operation for the removal of tuberculous growths. Cachexia in malignant growths is, as a rule, a distinct contraindication, exception being made in cases of ulcerative carcinoma where the cachexia is due largely to the absorption of decomposing products. The question of time is also considered, and the need of expedition should not prevent thorough and careful work. On the other hand, prolonging the operation may be disastrous, and prolonged anesthesia is dangerous and infection is more likely to occur. He protests alike against insane haste in performing operations and imbecile deliberation; it is difficult to say which is the worse. The operation should include a minimum of traumatism and there should be the least possible manipulation of tissues.

Nashville Journal of Medicine and Surgery.

November, 1902.

73 *The Therapeutic Value of Heat and Cold Applied to the Spinal Column. W. Frank Glenn.

73. **Heat and Cold Applied to the Spinal Column.**—Glenn emphasizes the importance of heat and cold as applied to the spinal column in treating various conditions. He has brought on the suppressed menstrual flow by the application of ice to the lower dorsal and lumbar region, and has arrested uterine hemorrhage by hot-water packs at a temperature of 115 to 120 over the same tract. He has also seen congested lungs readily relieved by hot-water applications over the lower cervical and upper dorsal spine, and fever, he says, can be absolutely controlled by the application of hot water over the cord from the fourth cervical to sixth dorsal vertebra. His view is that nothing should be put into the stomach except such substances as form a component structure of the body, and if this rule were followed we should have no digestive disorders, and always have a normal blood, and since the amount of blood in any part is controlled by the action of the vasomotor centers in the cord and the sympathetic ganglia in close proximity to the cord, any disease causing local circulatory disorder can be thus located and treated. To get the proper effects of heat and cold applied to the cord, the anatomy and physiology of the nervous system must be scrupulously borne in mind.

Medical Mirror, St. Louis.

December, 1902.

74 *Congenital Dislocation of Hips; with Report of Case and Description of a Pelvis Obtained Three Years After Successful Reduction by the Lorenz Method. Edward H. Ochsner.
75 The Grippe Convalescence. T. J. Biggs.
76 Ophthalmic Neonatorum—Gonorrheic Ophthalmia—Pathology, Etiology, Prognosis. L. R. McCready.
77 The Value of Trikresol as an Antiseptic in Ophthalmic Practice. Edward Jackson.

74.—This article has appeared elsewhere. See THE JOURNAL, xxxix, title 51, p. 447.

Atlanta Journal-Record of Medicine.

December, 1902.

78 Diuretic Medication in Various Diseases. T. Solacolu.
79 *The Present Day Mortality of Pneumonia. Alex G. Brown, Jr.
80 How an Enterolith May Behave. T. M. McIntosh.
81 Etiology and Treatment of Acne Vulgaris. F. H. Beadles.

79.—This article has appeared elsewhere. See THE JOURNAL, xxxix, title 45, p. 1547.

Texas Medical Journal, Austin.

December, 1902.

82 Social Aspects of Tuberculosis. F. E. Daniel.
83 What a Doctor Should Do and What He Should Not Do in Case of Labor. T. J. Bell.
84 The Mosquito and Malaria. A. N. Perkins.

Woman's Medical Journal, Toledo, Ohio.

December, 1902.

85 The Lane Lecture Course. Mary Ryerson Butin.
86 Pregnancy and Parturition from a Woman's Point of View. Margaret E. Colby.

Texas Medical News, Austin.

November, 1902.

87 Early Diagnosis of Empyema. J. P. Oliver.
88 Metritis. J. M. Nicks.
89 Puerperal Eclampsia. G. W. Foster.
90 Some Points in the Treatment of Chronic Ulcers. H. W. Cummings.

The Physician and Surgeon, Detroit and Ann Arbor, Mich.

September, 1902.

91 The Spirit of Research in Medicine. Frederick G. Novy.
92 A Plea for More Scientific Prescribing. Walter J. Wilson, Jr.

Alabama Medical Journal, Birmingham.

December, 1902.

93 Tuberculosis. Y. L. Abernathy.
94 Curettage—Its Indications and Technic. Monroe Smith.

95 *Report of a Case of Septicemia as I Felt It Myself. J. C. Newman.
96 The Use and Abuse of the Morphin Sulphate. H. L. Appleton.
97 The Conduction of Early Infancy. J. Ross Snyder.
98 Fractures of the Skull. W. H. Wilder.

95.—This article has appeared elsewhere. See THE JOURNAL, xxxix, title 26, p. 1278.

Medical Times and Register, Philadelphia.

December, 1902.

99 Cerebrospinal Meningitis. Henry T. Hotchkiss.

Medical Bulletin, Philadelphia.

December, 1902.

100 The Treatment of Chronic Alcoholism. John V. Shoemaker.
101 Pemphigus of Mucous Membranes. J. Charles.
102 The Treatment of Obesity. George A. Hewitt.

Kansas City Medical Record.

December, 1902.

103 Paraplegia. H. O. Hanawalt.
104 "Taking Cold" a Misnomer. T. F. Lockwood.
105 Extrinsic Lesions of the Spine, Dependent on Traumatism. Thomas H. Manley.

New England Medical Monthly, Danbury, Conn.

December, 1902.

106 Notes on the American Medical Association. C. B. Newton.
107 Leg-Cramps in Elderly People—A Mode of Treatment. John MacDonald.
108 The Nervous Symptoms of Chronic Bright's Disease. James Hendrie Lloyd.

Peoria Medical Journal.

December, 1902.

109 The Responsibility of the Surgeon in Caring for the Patient. Anna M. Braunwarth.
110 Report of Two Cases of Gallstones in the Gall-Bladder. C. U. Collins.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Annales d'Hygiene Publique (Paris), xlviii.

1 (No. 1.) La destruction des stegomya fasc. et la fièvre jaune. Bordas.
2 *Examination for Typhoid Bacillus in Water. Busquet.—Recherche du bac. d'Eberth dans les eaux.
3 Nouvelle méthode de régéneration de l'air confiné à l'aide du bioxyde de sodium. A. Desgrez.
4 *Danger que peut presenter la consommation des légumes et des fruits.
5 L'hygiène corporelle en China. Coullaud.
6 (No. 2.) Le traumatisme, la tuberculose et la loi (law) sur les accidents du travail. E. Mosny. (Commenced in No. 1.)
7 Composition et valeur alimentaire des mammifères, des oiseaux (birds) et des reptiles. A. Balland.
8 Le lait (milk) et la mortalité infantile dans les principales villes de France. C. Gerard and F. Bordas.
9 (No. 3.) Les accidents du travail et les bons de pansement (tickets for dressings for industrial accidents). R. Marcel.
10 De la reforme du régime alimentaire dans les hôpitaux. A. Chauffard.
11 La différenciation du sang (blood) par le serum spécifique. Stoenesco.
12 Suggestion for Determining Loss of Working Capacity in Industrial Accidents. G. Desanches and G. Brouardel.—Projet d'évaluation de diminution de valeur ouvrière.
13 (No. 4.) *Considerations sur quelques cas de mort subite (sudden death). N. Stoenesco.
14 Accidents du travail. A. Duchauffour.
15 The Garbage Question. P. Reille.—Les ordures menagères.
16 (No. 5.) Cas d'intoxication par des chaussures jaunes noircies (russet shoes dyed black) a l'aniline. P. Brouardel.
17 Les vieux papiers (old papers) et l'hygiène. P. Reille.
18 La legislation sanitaire industrielle en France et à l'étranger. Ibid.

2. **Examination for Typhoid Bacilli in Water.**—Busquet describes experiences which prove that the typhoid bacillus may be found in the mud or slime at the bottom of wells, cisterns, sluggish streams, etc., after it can no longer be found in the water above.

4. **Danger from Raw Vegetables and Fruits.**—The Public Health Society, of which the *Annales* is the organ, adopted resolutions appealing to the authorities to absolutely prohibit on sewage farms the raising of vegetables and fruits which are eaten without cooking.

13. **Certain Causes of Sudden Death.**—Stoenesco relates a number of instances from his extensive experience of sudden deaths from unusual causes. In a few cases, suffocation was caused by an intestinal worm. In one case a footman vomited, but for fear of soiling the floor retained the vomited matter in his mouth and a deep inspiration drew it into his lungs. Fragments of the vomit were found in remote ramifications of the air-passages. In another case unsuspected pneumonia caused the sudden death of a bridegroom. Four men cleaning a vault succumbed suddenly to acute suffocating catarrh. In two cases a hydatid cyst or tubercular tumor in the left ventricle was the cause of death; in others spontaneous rupture of the heart or of an aneurism while the subject was quietly walking or writing, and in ten cases death was the result of a perforating ulcer in duodenum or stomach which had been unsuspected. In others, a large calculus impacted in the bile duct; rupture of enlarged heart in a slight accident; hemorrhage from varicose veins in a pregnancy nearly at term, or retention of urine in a man with hypertrophied prostate and dilatation of the ureters. The statistics at Bucharest show that renal lesions are responsible for about 50 per cent. of all cases of sudden death.

Progres Medical (Paris), xxxi.

19 (No. 40.) De la fièvre bilieuse hémoglobinurique observée en Grèce. J. P. Cardamatis. (Commenced in No. 38.)
20 (No. 41.) *De la cholelithiase biliare. Zalackas.
21 *Contribution à l'étude de l'isotonie des globules rouges (reds) de l'homme. S. Distefano.
22 (No. 42.) *Relations between Typhoid Fever and Insanity. A. Paris.—Contribution à l'étude de la fièvre tiphoide. De ses rapports avec l'aliénation mentale.
23 (No. 43.) Double dacryoadenite avec iritis double. E. Millée.
24 (No. 44.) Tennis Arm. Clado.
25 (No. 45.) Students' Number. Medical Guide to France and her Colonies.—Numero des Etudiants.
26 (No. 46.) Sur la transmissibilité de la fièvre aphtheuse, stomatite aphtheuse, des animaux à l'homme (from animals to man). H. Roche.
27 (No. 47.) *Myopathie du tétanos. Urriola (Panama).
28 (No. 48.) Illustrated Description of New Académie.—La nouvelle Académie.

20. **Biliary Cholelithiasis.**—Zalackas reviews 36 cases of fistula, the result of gallstones. Expectant treatment in 12 failed to prevent the death of 5, while all the cases treated by surgical intervention were promptly cured, with one exception.

21. **Study of Red Corpuscles with Iodin Solutions.**—Distefano describes his experiments, which have led him to the conclusion that regeneration is occurring whenever the microcytes in a weak solution of iodin are of normal aspect and numbers. He has found that the best formula for the solution is 18.75 gm. metallic iodin; 37.5 gm. potassium iodid and 300 c.c. of distilled water. The reaction to this fluid of the red corpuscles varies with their size, and he accepts that the smaller cells are the youngest, consequently the presence of numerous small cells is evidence that regeneration is proceeding more or less normally.

22. **Relations Between Typhoid Fever and Insanity.**—In two cases in Paris' experience at a large insane asylum melancholia in women predisposed by heredity and privations or emotions passed away with an intercurrent typhoid fever, and the patients recovered from both at the same time. The stimulation of the functions of assimilation evidently restored the normal balance during convalescence from the fever. Two other similar cases were temporarily improved, but the melancholia returned after convalescence. There was a substratum in these cases of serious climacteric circulatory disturbances. He also noted that maniacs in many cases recovered their reason during the height of the typhoid fever, and had no febrile delirium. This never occurred in subjects who were congenitally degenerates. Delirium occurred in the latter under the influence of typhoid fever as in otherwise normal subjects. This fact may serve as a basis for physiologic study of the differences between true degenerates and the delirious insane. Hygiene and therapeutics offer better prospects in the treatment of the latter than of the former. Typhoid febrile delirium, therefore, of the ordinary type, indicates that the subject was previously normal or merely a simple degenerate, and is not actually insane. The hallucinations and mania of true insanity diminish temporarily under the influence of the typhoid fever, as also the convulsive manifestations and psychic troubles of epilepsy. These facts should be borne in mind when committing a person to an asylum, as an unsuspected typhoid condition may mask the true diagnosis. Post-typhoid mental disturbances are of the type of cellular degeneration, rather

than of actual insanity. The mental condition resembles the mental debility observed in certain cases of hemiplegia, syphilis, etc. In short, typhoid fever may transiently improve and sometimes cure certain mental affections, but can never be the cause of this same type. The type affected is that in which hereditary influences are the basis for loss of mental balance in case of privations, emotions, debauch, alcoholism, emotional stress, or other accidental physical disturbance.

27. **Myopathy from Tetanus.**—Urriola's patient was a field hand of 34, exhibiting a typical case of myopathy with "clasp-knife rigidity" and progressive atrophy. The condition followed a severe attack of "spontaneous tetanus" six years ago.

Archiv f. Klin. Chirurgie (Berlin), lxviii.

30 (No. 1.) *800 Radical-Operationen nach Bassini und deren Dauer-Resultate (ultimate results). S. Goldner.
31 Successful Ablation of Cyst in Occipital Lobe. Thiem.—Ueber die erfolgreiche op. Entfernung einer im linken Hinterhauptslappen entstandenen Hohlgeschwulst.
32 *Ueber die Blut-Cysten am Cranium (Hematocele sinus pericranii) und ihre Behandlung. F. Franke.
33 Ueber diffuse adhäsive Peritonitis in Folge von Appendicitis. Karewski.
34 *Resultate bei operative Behandlung carcinomatöser Dickdarmgeschwulste (tumors in large intestine). J. Hochenegg.
35 Zur Kenntniss der Blutergelenke (bleeder joints). K. Mermingas.—König's clinic; 3 cases.
36 *Course of Ileus in Case of Carcinoma in the Intestines and Local Meteorism of the Cecum with low-seated Occlusion of Large Intestine. W. Anschütz.—Ueber den Verlauf des Ileus bei Darmcarc. und den localen Meteorismus des Coecum bei tiefsitzendem Dickdarmverschluss. Mikulicz' clinic.
37 Ueber frühzeitige (early) operative Behandlung uncomplicierter intra- und paraarticulärer Fracturen. Lessing.—König's clinic.
38 Myome des Mastdarmes (rectum). E. Lexer.—Bergmann's clinic.
39 *Ueber einen nicht gewöhnliche Fall von Cephalocele und über die post-operative Hydrocephalie. G. Muscatello.
40 *Ueber die Diagnose der Spina bifida und über die post-op. Hydrocephalie. Ibid.
41 (No. 2.) Development of Fissured Palate. R. Fick.—Zur Wolfsrachenbildung.
42 Zur Früh- (early) Operation bei Appendicitis. E. Payr.—Nicoladoni's clinic.
43 Attempt at Collective Summary in Respect to Early Operation in Appendicitis. Sprengel.—Versuch einer Sammelforschung zur Frage der Früh-Operation bei acuter App. und persönliche Erfahrungen.
44 *Die Erkrankungen der regionären Lymph-Drüsen beim Carcinoma der Pars pylorica des Magens. Lengemann.
45 Zur Frage der retrograden Incarcerationen. R. v. Wistinghausen.
46 *The Natural Means of Alleviating Pain in the Organism. C. Ritter.—Die natürlichen Schmerzlindernden Mittel des Org.
47 Ueber plastiche Deckung (closure) von Knochenhöhlen (bone cavities), nebst einem Fall von osteoplastischem Ersatz (substitution) des Os cuboides. Busalla.
48 *Zur Diagnostik der physiologischen und path. Nieren- (kidney) Function. F. Straus.
49 *Experimental Study of Ligation of Large Vessels in Liver. C. Ehrhardt.—Ueber die Folgen der Unterbildung grosser Gefässstämme in der Leber. Garré's clinic.
50 Lungen-Complicationen bei Appendicitis. E. Sonnenburg.
51 Ueber Carcinom-Recidive (recurrence). C. v. Kahlden.
52 Ueber die Ursachen (causes) der Stieldrehung (torsion of pedicle) intraperitoneal gelegener Organe. E. Payr.
53 *Zur bacteriellen Etiologie und zur Behandlung der diffusen Peritonitis. P. L. Friedrich.
54 Ueber Exarticulatio pedis mit dem Cirkel-Schnitt. O. Samter.
55 Ueber den Wundverlauf (course of the wound) Nach Hernie-Operationen. Ibid.
56 Ueber die sogenannte diffuse wahre Mamma-Hypertrophie und ihr Verhältniss (relations) zum Fibrom. L. Kirchheim.
57 (No. 3.) Ueber die Lumbal-Hernien und seitliche Bauch-Hernien (Laparocele). R. v. Baracz.
58 Ueber die Lendengegend (lumbar region) mit bes. Berücksichtigung der Durchtrittsstelle (emerging point) der Lenden-Hernien. Ibid.
59 *Zur Theorie und Praxis der chirurg. Desinfection. E. Braatz.
60 Ueber papilläre Tumoren des Nierenbeckens (renal pelvis) in klinischer und path.-anatomischer Hinsicht. F. Pels-Leusden.—König's clinic.
61 Ueber die Laparotomie im Kriege (war). V. Hippel.
62 *Ueber Darm-Invagination. Haasler.—V. Bramann's clinic.
63 Bird-Eye Inclusions in Tumor Cells. C. Posner.—Ueber die vogelaugenähnliche Einschlüsse in Geschwulstzellen.
64 (No. 4.) Zur Castration bei Hoden (testicle) Tuberculose. L. Berger. Trzebicky's clinic.
65 Zur operative Behandlung der Lymphome am Halse (neck). R. Trzebicky.
66 Die Behandlung der Prostata-Hypertrophie. T. Rovsing.
67 Cysts in Long Bones. G. Koch.—Ueber Knochencysten in den longen Röhrenknochen. Körte's clinic.
68 Darm-Invagination in das Rectum in Folge von Carcinom-Bildung im S. romanum. Herburg.
69 Die otitischen Symptome der Basis-Fractur. Stenger.—Trautmann's clinic.
70 *Kreislaufverhältnisse (conditions of circulation) und locale Tuberculose. G. Friedländer.
71 Ueber die Aktinomykose des Menschen (in man) auf Grund eigener Beobachtungen. R. v. Baracz.
71½ Die Verletzungen der Milz (injuries of spleen) und ihre chirurgische Behandlung. E. Berger.—Kehr's clinic. (Commenced in No. 3.)

30. **Permanent Results of 800 Bassini Operations.**—Goldner reviews the results achieved at the clinic of the late Professor Albert of Vienna, and notes that primary healing is not the only deciding factor for the ultimate outcome. There was recurrence of the hernia in 35 cases; suppuration occurred in only 10 of these. In 3 the muscles seemed to be defectively developed, and in 5 there was senile alteration. In 2 the local anesthesia may have been responsible, as it possibly interfered with suturing. In 4 nothing could be discovered to explain the recurrence. In 3 cases a femoral hernia developed after a radical operation on an inguinal hernia. In 9 of the cases of recurrence severe work was resumed in three weeks. He advises waiting three months when possible, and believes that the absence of early severe work is the reason why the operation is more apt to be successful in children. Three of the patients died, one during the narcosis and 2 from embolism. Both of the latter had large varices on the legs, and this condition should impose caution in doing a radical operation.

32. **Blood Cyst in Skull.**—Franke's patient was a young woman, and the cyst owed its origin to a congenital hole or fissure in the skull. There was probably merely a congenital varix at the spot at first, but as it grew it enlarged the hole and the edges of the bone were absorbed. After the copious hemorrhage had been arrested by inserting the finger in the hole and then tamponing, he completed the operation by introducing a piece of silver-wire netting, about 4 by 8 cm., beneath the skin, draining and suturing.

34. **Results of Operative Treatment of Carcinoma of Large Intestine.**—Hochenegg compares his results with those obtained by other surgeons, and thinks that they confirm the benefits of his sacral method of extirpating a carcinoma in the rectum. He has had 237 such cases and operated on 174; 158 were cured, and only 16, or 9.12 per cent., died. Czerny's mortality has been 10 per cent.; Krönlein's, 12.1; Mikulicz's, 25.7; Kocher's, 28.5; Bergmann's, 32, and König's, 32.5 per cent. Hochenegg states that he lost none of his patients from the narcosis, from hemorrhage during or soon after the operation, from shock or collapse, nor from post-operative pneumonia, while the reports of others attribute about 50 per cent. of the mortality to one or more of these causes. He warns that a diarrheic stool is much more poisonous than a formed stool, and hence denounces the practice of administering a purgative before operating. He operated by the perineal route in 8 cases and by the sacral in 112. Thirty, or 25 per cent., of these 120 patients are alive to-day after a minimum of three years. Ten of the 30 are completely and 2 comparatively continent. The others have a sacral anus and are incontinent. He calls the year after the operation the "quarantine year" as progression of the lesion is revealed within this time by sacral pains, emaciation, etc. He operated on 194 out of the 283 cases of cancer of the intestines that have come under his observation. The total mortality has been 24, and 170 have remained cured to date. In 30 the intervention was merely palliative.

36. **Course of Ileus in Carcinoma in Intestines.**—Anschütz mentions that in 14 out of 26 cases the ileus developed without premonitory symptoms and the assumed volvulus proved to be a carcinomatous lesion. He calls attention to the localized meteorism observed in the cecum in case the carcinoma is located low down and the ileocecal valve is unusually resistant. The local distension of the cecum is an aid to diagnosis, but it is always a bad sign when very pronounced.

39. **Post-Operative Hydrocephalus.**—Muscatello has found that secondary hydrocephalus occurring after surgical intervention is usually due to syphilis and can be cured by specific treatment combined with repeated evacuation of the fluid. A suppurative process occurring in cases of spina bifida is almost certain to be followed by meningitis or hydrocephalus, which in this case is due to pyogenic infection, and has a grave prognosis.

44. **Involvement of Lymph Glands in Carcinoma of Pars Pylorica.**—Twenty cases of carcinoma of the pyloric portion of the stomach observed at Mikulicz's clinic were carefully scrutinized, and only one case was found entirely free from

some metastasis in the glands of the region. About 189 glands were examined, and 110 were found sound, but others at a distance were affected. By removing all the small omentum the glands in it are extirpated at the same time, and there have been no indications of gangrene or other disturbance from inadequate blood supply in his experience. The glands in the lesser curvature were found involved more frequently than those in the greater curvature. In only two cases were they exempt, and 50 per cent. were affected.

46. **Natural Means of Alleviating Pain.**—Ritter makes the announcement in this article that he has established by his research that the pain from a serous effusion is not caused by the mechanical action of the fluid but by its concentration. The constant destruction of albumin produces rapidly a very concentrated fluid, which causes intense pain, but as more serum mixes with it, the pain diminishes as the dilution increases. The concentration of the fluid is evidenced by the variation of the freezing-point. It averages normal in the pus of a cold abscess, but may be .715 C. in empyema pus, etc. Bier has called attention to the fact that his methods of inducing artificial hyperemia or venous congestion reduce the pain to a marked degree. Ritter shows that this alleviation of the pain is due to the dilution from the hyperemia or venous congestion in the concentrated effusion. We must assist Nature in this process of dilution, and we will be able in this way to systematically alleviate pain. He has been most gratifyingly successful in the application of these principles to the treatment of severe, painful burns, inducing venous congestion, according to Bier's directions. (See THE JOURNAL, xxxviii, p. 1113.)

48. **Functional Tests of Kidneys.**—Straus confirms the fact that under physiologic conditions the kidneys work alternately and exactly alike. He describes two cases in which a carcinoma or ulceration had destroyed almost the entire parenchyma while the glomeruli were still intact. The phloridzin test had been positive, to a slight extent, which indicates that the glomeruli may be regarded as the seat of the transformation of phloridzin.

49. **Experimental Ligation of Portal Branches.**—Ehrhardt found that the disturbances induced in the liver by ligation of large branches of the portal vein were merely transient. The shriveling and ascites noticed soon became compensated by the regenerative forces of the organ and the establishment of collateral circulation.

53. **Treatment of Generalized Peritonitis.**—Friedrich was able to save all his ten patients with generalized peritonitis traceable to appendicitis or traumatism, and he attributes his success to his method of draining and of subcutaneous nourishment. He remarks that anaërobic bacteria are probably involved in the process more than is generally appreciated. He drains with a special trocar inserted through the abdominal wall, and passed behind the uterus and out through the vagina. A drain tube is hooked on the trocar guide and is then drawn in by the latter until it emerges in the space behind the uterus, while the shell of the trocar is held at the entrance to the vagina. The drain tube is thus brought into the exact point in the Douglas where most needed, and without the slightest scraping of the walls of the vagina. The shell can then be removed. He injects 30 to 100 or even 150 c.c. of olive oil, leaving the canula in place and injecting it always at the one point. It is absorbed in less than an hour.

59. **Surgical Disinfection.**—Braatz announces that warming gauze to 60 C. has no effect on its further disinfection, and that superheated steam—at 110 to 122 C.—does not permeate the gauze. The disinfection is most complete when the gauze is warmed beforehand to 88 C. and then exposed to steam at 100 C. The gauze takes up the steam under these conditions, but must be kept in a wire frame away from the walls of the receptacle. He proclaims that steam sterilization as usually done is ineffectual.

62. **Invagination of Intestines.**—Haasler advocates resection far into sound tissue as the only safe way to treat an invaginated loop. In his 10 cases the invagination was traceable to a tumor in the intestinal wall in 3; to adhesions left after appendicitis in 2, and to a tuberculous lesion in one. He also reviews 133 cases which he has collected.

70. **The Circulation and Local Tuberculosis.**—In Friedländer's experiments animals inoculated in the femoral artery, with a suspension of charcoal dust, lime, lycopodium, or other substances, including weakly virulent cultures, developed local processes at the very points which display a predisposition for local tuberculosis. Even in physiologic conditions the current is peculiarly sluggish and the walls of the vessels exceptionally thin at these points, evidently favoring the deposit of foreign particles and of bacteria.

Centralblatt f. d. Grenzgebiete der Med. u. Chir. (Jena), v.

72 (No. 20.) *Acuter und chronischer Gelenks- (articular) Rheumatismus, Entstehung (origin) und Beziehung zu anderen Gelenks- (and relations to other joint) Affectionen. W. Predtetschensky. (Commenced in No. 17.) Critical Review.

73 (No. 22.) *Ueber die Erkrankungen der Mesenterialgefässe (vessels) und ihre Bedeutung (significance) für die Chirurgie. W. Neutra. (Commenced in No. 18.) Critical Review.

72. **Study of Articular Rheumatism in Relation to Other Joint Affections.**—In this communication from Moscow forty-six of the latest articles on articular rheumatism are reviewed, including a number of Russian works. The writer first points out the incongruity of the term "rheumatism" from rheuma, a flux, as applied to many joint affections. Physicians usually content themselves with the term "rheumatic" as meaning an affection due to getting chilled, but late researches demonstrate that this is very unscientific and entails confusion. They should trace the joint affection to its actual cause. When this is done it will be found that a new classification is necessary. The term "chronic rheumatic polyarthritis" will be reserved for the chronic multiple joint affection in which there is known to be an unmistakable connection with acute articular rheumatism. The cases which have been hitherto labeled chronic articular rheumatism but whose origin is obscure will be classed as chronic polyarthritis without any descriptive term. This is certainly better than to ascribe to rheumatism cases which have nothing in common with it except the external appearance. Acute articular rheumatism very rarely passes over into the chronic form, and consequently the number of cases of true chronic rheumatic polyarthritis will be found very small. The domain of progressive deforming polyarthritis will contain besides the essential polyarthritis deformans and malum senile coxæ, the varieties which have been known as polyarthritis chronica villosa hyperplastica, many cases of nodular rheumatism, and some of Haberden's nodules (others will be found to belong in the class of uric polyarthritis). As the physician learns to trace the connection between the polyarthritis and various infections he will distinguish between the true rheumatic acute and chronic polyarthritis and the gonorrheal, the erysipelatous, the typhoid and the pneumococcous. Possibly also the scarlatinal, dysenteric, tuberculous, syphilitic, the neurogenic (in case of tabes and syringomyelia), the polyarthritis accompanying osteoarthropathy of Marie-Bamberger, and polyarthritis deformans progressiva, urica, and possibly also polyarthritis urica, syphilitica et deformans. This makes fifteen classes besides that of simple polyarthritis chronica.

73. **Affections of Mesenteric Vessels.**—Neutra reviews the literature on this subject and gives a brief summary of the various cases he has been able to find of occlusion of the mesenteric vessels, aneurisms and periarteritis nodosa. They include a number published in America. Occlusion of the mesenteric vessels is due to embolism or thrombosis, and the resulting alterations in the intestines range from mere hyperemia to gangrene, peritonitis, etc. The onset is usually sudden, violent pains around the umbilicus or in the epigastrium, hypochondrium or lower abdomen, diarrhea, and, in 30 per cent. of the cases on record, intestinal hemorrhages. Ileus is observed quite frequently later and distension of the abdomen. In 2 instances tumors could be palpated which proved to be accumulations of blood between the sheets of the mesentery. The prognosis depends on the establishment of collateral circulation, and treatment should aim to promote it. Light massage of the abdomen may be useful, as it enhances the local circulation and may break up the coagulum. This treatment, with efforts

to raise the blood pressure, is indicated in the colic stage and on the appearance of intestinal hemorrhages. After symptoms of ileus have developed, all nonsurgical treatment is inevitably hopeless. Only a few cases have been reported in which operation proved successful, and these were all undertaken at the stage when the intestine was already dark colored but with no signs of gangrene or peritonitis. The cases on record number 120; in 86 the arteries, and in 32 the veins were involved. One-third of the patients were women. The age ranged from 5 to over 90 years, but the majority were in or past middle life. In 108 cases that terminated fatally, 29 seemed to run a slow, chronic course. The clinical picture of periarteritis nodosa is a characteristic combination of neuritic or myositic symptoms with gastrointestinal manifestations.

Centralblatt f. Gynaekologie (Leipsic).

74 (No. 47.) *Zum Accouchement forcé mittels Metall-Dilatatoren. L. Knapp.
75 *Ibid. Wagner, C. W. Bishoff, H. Langhoff, A. Mueller and V. Frommer.
76 *Zur chirurgischen Behandlung des Uterus-Krebses (cancer). O. v. Franqué.
77 (No. 48.) *Beitrag zur Casuistik der Cervico-Vaginal-Fisteln. E. Wormser.
78 *Fistulæ cervico-vaginales laqueaticæ. E. Dirmoser.
79 *Vaginaler Sectio cesarea bei Portio-Carcinom. Kallmorgen.
80 *Ibid. F. Weber.
81 *Lateraler Sectio durch das Os pubis. L. Gigli.
82 *Vorläufige Mittellung über die Anwendung von Skopolamin-Morphium-Injectionen in der Geburtshilfe (obstetrics). V. Steinbüchel.

74 and 75. **Accouchement Force by Means of Metal Dilators.**—Knapp presents a dilator made on the principle of Bossi's, but which he thinks is a great improvement, as it is simpler and the action of the spreading lattice-work ring is more even and spreads over a larger surface than with the four arms of the Bossi dilator. The arms and the ring can be protected by rubber caps. Wagner reports fine results from the use of metal dilators, confirming the statements of Leopold and Knapp in regard to the great value of this method of delivery, especially in eclampsia, and that it should entirely supersede Cesarean section in such cases. He reports 3 cases, Bischoff 5 and Langhoff 2, in which a completely-closed portio was enlarged in twenty to thirty minutes by means of the dilator (Bossi's) with minimal hemorrhage and no injury to the parts. Mueller delivered a patient in twelve minutes by this means in narcosis and extracted a thirty-weeks' fetus. It is possible, he adds, to enlarge the os in eight minutes sufficient for version, and, with a little further dilation by the hand, immediate extraction of the child. He uses a dilator made on the principle of a glove stretcher, which seems to answer the purpose perfectly well, although he prefers his inelastic rubber bag or metreurynter when haste is not necessary. He states that it is possible under favorable conditions to accomplish the dilation with the latter in ten minutes without narcosis, and reports a case. Frommer illustrates a dilator, which he claims is superior to Bossi's, as the dilation is accomplished with eight instead of four arms, and they stretch the vagina as well as the os. When folded, the dilator looks like the frame of a closed umbrella, but when dilated by means of a screw in the handle and graduated scale, the instrument resembles the partially-opened frame of an umbrella, but with the handle emerging from the top. All the branches can be taken out to be sterilized separately.

76. **Surgery of Uterine Cancer.**—Franqué advocates the more general use of supravaginal amputation according to Schroeder in the treatment of certain cases of beginning cancroid of the portio, and states that patients operated on in this way by Hofmeier and himself are still well after six years. He also doubts whether the columnar epithelium cysts found in the pelvic glands in cases of uterine cancer should be regarded as metastatic. He has noticed them in cases of basement epithelium neoplasms without a trace of glandular degeneration in the primary tumor and also in a case which exhibited both these cysts and metastases of the carcinoma, but with no apparent connection between them. He has never yet found them in women free from cancer, but thinks they could be found with more extensive material. He mentions, in conclusion, a case of malignant chorio-epithelioma operated on more than seven years ago by vaginal total extirpation about four months after delivery and about three months after the first hemorrhages had been noted. The patient is in good health to date.

77 and 78. **Cervico-Vaginal Fistulae.**—Wormser adds another to the nine cases collected by Neugebauer. The patient was a young primipara in the fifth month. The posterior wall of the cervix tore spontaneously during the third day of labor, and the fetus was evacuated through the laceration. There were no venereal nor abortive antecedents. Dirmoser reports a similar case in the fourth month. The fistulæ in each were rebellious to various operative measures. They were both longitudinal, and while Wormser's patient was left sterile, Dirmoser's patient passed through a second abortion and then was delivered of a healthy boy through the fistula. The natural os was impermeable.

79 and 80. **Vaginal Cesarean Section in Carcinoma of the Portio.**—Kallmorgen delivered twins in the eighth month of pregnancy by this means in a case of operable carcinoma of the portio in a v-para, 32 years old. The children died in the course of two weeks, but the mother made a smooth recovery, with very little hemorrhage. Weber delivered a healthy boy by this means, but the child succumbed a month later to acute gastritis. There was no shock nor appreciable hemorrhage. He has collected 13 cases of vaginal Cesarean section with portio carcinoma in the literature. Two of the patients were very weak and died from heart failure. All the others recovered. Nine of the children lived; some of them weighed more than 4000 gm. He recommends, therefore, Dührssen's vaginal Cesarean section as the standard procedure for cases in which beginning cancer of the portio is diagnosed at the close of pregnancy, with a normal pelvis and yielding soft parts.

81. **Lateral Symphysiotomy.**—Gigli's extramedian section of the pubis was described in THE JOURNAL, xxxix, p. 226.

82. **Scopolamin-Morphin Anesthesia in Obstetrics.**—Steinbüchel portrays the benefits derived from a harmless anesthetic which banishes pain for a few hours, attaining its maximum effect in one and one-half hours, without affecting the contractions of the uterus, injuring the child nor inducing consecutive atony of the uterus such as is liable to follow chloroform. He accomplishes this by the scopolamin-morphin method of anesthesia. The narcotic effect of the two drugs is superposed, while their other effects are apparently mutually neutralized. He injects at first half a syringeful, and after two hours a full syringeful. The dose was .0003 gm. of scopolamin and .01 morphin to the syringeful. With the exception of a brief period of excitement in one very nervous i-para, 42 years old, he never witnessed the slightest by-effects from this method of anesthesia in his extensive experience. If necessary, a few whiffs of ether or chloroform may supplement it in case long surgical intervention is required.

Dermatologische Zeitschrift (Berlin), ix.

83 (No. 5.) Dermatoses After Use of a Hair Dye. M. Wolters.—Ueber Hautaffectionen nach dem Gebrauch von Aureol.
84 Die Zahndifformitäten (teeth deformities) in der Diagnose der hereditären Syphilis. F. Poor.
85 Erfahrungen über die Behandlung und Heilung der Lepra im Riga'schen städtischen Leprosorium. M. Hirschberg.
86 Fall von Granuloma trichophyticum Majocchi. P. Colombini.
87 Die microscopische Technik im Dienste (in the service) der Dermatologie. R. Ledermann. Collective Review. (Commenced in No. 3.)
88 Education of the Public in Regard to Venereal Diseases. O. Lassar.—Zur Prophylaxe der ven. Krankheiten.
89 Report of international Preventive Conference.
90 (No. 6.) Action of Continuous Warmth on Skin and Other Organs. K. Ulmann.—Ueber Wirkungen constanter Wärme auf die Haut und andere Organe mit Demonstration des Hydro-thermo-Regulators und verschiedener Thermokörper.
91 Case of Mercurial Exanthem. P. Thimm.—Ein schweres, spät eintretendes bulloses Quecksilberexanthem nach 12 Einreibungen mit grauer Salbe.
92 *Direct Application of Radiotherapy to Interior of Urethra. H. Strebel (Munich).—Lichttherapeutische Spezialitäten und neue Licht-Generatoren.
93 Peculiar Hair Anomaly. S. Giovannini.—Eigenthümliche leichte Ausziehbarkeit der Papillenhaare und ihrer Wurzelscheiden.
94 Radiotherapy at II International Congress for Medical Electrology and Radiology. Berne, September 1-6.
95 Report of Section of Dermatology at Naturforscher Congress.

92. **Direct Radiotherapy of Interior of Urethra.**—Strebel's success in this line has already been mentioned in THE JOURNAL, xxxix, p. 1,075. He illustrates his apparatus and

describes the principles on which it is constructed, to eliminate the irritating rays. He offers the simple contrivance as a means for treating inflammatory processes in the urethra, which promises to be as effectual as the other applications of radiotherapy.

Jahrbuch f. Kinderheilkunde (Berlin), lvi.

96 (No. 2.) 2 Fälle von Anencephalie. M. Wichura.
97 Erfahrungen über die Bulau'sche Aspirations-Drainage bei der Behandlung eitriger Brustfellergüsse (suppurative pleural effusions). P. Oloff.
98 Ueber die verschiedenen Formen des Icterus im Säuglingsalter (infancy). B. Skormin.
99 *Ueber Calomel in der Kinderheilkunde (in pediatrics). S. Schoen-Ladniewski.
100 Erstickung (suffocation) durch Aspiration necrotischen Massen aus einer perforierten tuberculösen trachealen Lymphdrüse. A. Horst.
101 Fall von Hernia ventralis lateralis congenita. J. Steinhardt.
102 (No. 3.) Infant Mortality in Norway. A. Johannessen.—Die SäuglingsSterblichkeit in Norwegen.
103 *Ueber Säuglings-Eczem. Strauss.
104 Ibid., und seine etiologische Beziehung zum Intestinal-Tractus und daraus sich ergebende Therapie. J. G. Rey.
105 Untersuchungen über die normale Ossification des Knorpels (cartilage). D. Pacchioni.
106 Beiträge zur künstliche Säuglings-Ernährung (infant feeding). F. v. Szontagh.
107 Untersuchungen über die Acidität und den Zuckergehalt (sugar) von Säuglingsstühlen (infants' stools). L. Langstein.
108 Noch ein Mal der Meningococcus intracellularis. O. Heubner.
109 (No. 4.) Zur Physiologie des Säuglingsalters (infancy). Camerer.
110 *Die Pneumococcen-Peritonitis im Kindesalter (childhood). M. Stooss.
111 *Zur Frage der congenitalen Rachitis. C. Escher.
112 (Supplementary Number.) Ueber die Fermente der Milch (milk). E. Moro.
113 Weitere Beobachtungen über die Nahrungsmengen (amounts of food) von Brustkindern (breast babies). E. Feer.
114 Ibid., unter Berücksichtigung des Energie Quotienten. W. Beuthner.
115 Ueber die congenitalen Herzfehler (cardiac defects). L. M. Spolverini and D. Barbieri.
116 (No. 5.) Functions of Child's Stomach in Digestive Diseases. T. v. Hecker.—Ueber die Functionen des kindlichen Magens bei Verdauungskrankheiten.
117 Beitrag zur Diagnose der Persistenz des Ductus arteriosus Botalli. K. Dresler.
118 Körpergewicht (weight) der Säuglinge nach socialer Gruppirung. H. Neumann.
119 Zur Pathologie der Maasern (measles). M. Brueckner.

99. **Calomel in Pediatrics.**—Ladbiewski does not believe in administering calomel for a laxative, preferring castor oil for this purpose, but he expatiates on its almost marvelous action in flatulent colic, dyspepsia, febrile gastrointestinal catarrh, convulsions from indigestion, icterus, hydrops and syphilitic and scrofulous eye affections. He orders it always in the form of calomel ophthalmicus as the finest pulverized, and gives ten or twelve doses of .005 to .02 gm., according to age. He warns that traces of sublimate develop in the mixture of calomel and sugar in time, and hence it should always be made up fresh. Sunlight decomposes calomel. Salt and salted foods, bitter almonds and cherry laurel water, iodin and ammonium chlorid have a tendency to transform part of the calomel into sublimate.

103. **Infantile Eczema.**—Eczema in infants can be influenced by appropriate internal treatment of the digestive tract, and this fact distinguishes it from the purely ectogenic parasitic and artificial eczemas of older children. But secondary infection may modify it in infants and require external as well as internal treatment.

110. **Pneumococcus Peritonitis in Children.**—The encapsulated form recovers rapidly after evacuation of contents. The prognosis is more serious when the peritonitis is not encapsulated. Nine died and 3 recovered out of 12 cases collected by Stooss, including one personally observed, which recovered. He has also had 3 cases of the encapsulated variety.

111. **The Question of Congenital Rachitis.**—Escher was unable to discover any traces of rachitis in a number of fetuses and still-born children examined.

Monatshefte f. Prakt. Dermatologie (Hamburg), xxxv.

120 (No. 8.) *Zur Naphthalan-Behandlung des Eczems. D. Awerbach.
121 Zur Tatowierung bei Frauenzimmer der öffentlichen und geheimen Prostitution. R. Bergh.
122 (No. 9.) Fall von Neuro-Fibromatosis mit starker Betheiligung der Haarbälge (hair follicles). A. v. Karwowski.
123 Fall von multipler circumskripter Sklerodermie. W. B. Warde.
124 Improved Zinc Glue Dressing. Rasch.—Verbesserung der Zinkleimdecke.
125 (No. 11.) Fall von positivem Gonococcen-Befund in einem epididymitischen Abscess. A. v. Karwowski.
126 *Muskel-Syphilis im Frühstadium (early stage). R. Matzenauer. (Commenced in No. 10.)

120. **Naphthalan in Treatment of Eczema.**—A number of writers, including Unna and Hallopeau, have reported much clinical experience with naphthalan, establishing that it is an effectual means for treating certain cutaneous affections, not irritating to the tissues and borne well by nearly every skin, while it displays great energy in drying up secretions, alleviating pain, soothing the itching, promoting the regeneration of the epidermis and absorption of infiltrates.

126. **Early Syphilitic Myositis.**—Matzenauer announces that the involvement of the muscles in syphilis is liable to occur early, in which case the proliferating interstitial infiltrate spreads throughout the muscle in a diffuse form and does not form foci. This infiltrate may be easily and rapidly absorbed and complete restitution is possible. Later in the disease the diffuse infiltration is liable to become transformed into gummatous foci. He witnessed this transformation in one instance. He has also observed cases with a rapid, malignant course, in which the nodular infiltration was marked in the early stages. Eleven of his 13 cases of syphilitic affections of the muscles were myositis diffusa, and he has found 26 similar cases in the literature. In 22 the myositis developed in the first year after infection and in 5 cases later than four years afterward. In 24 the myositis was restricted to a single muscle; in 5 it was symmetrical, and in 8 in various muscles successively or simultaneously. Six of the 37 cases were of the early malignant form, and in 2 of these the early infiltration softened and required operative treatment. The process is essentially the same in both the diffuse infiltration and the later gummatous formation, as he shows by colored photographs of sections from four cases, one an autopsy discovery.

Therapie der Gegenwart (Berlin), November.

127 Die Balneo-Therapie in ihren Verhältniss zur Gesammt-Medicin (in its relations to general medicine). C. Bäumler.
128 Fetor ex ore gastrointestinalen Ursprungs (origin). T. Rosenheim.
129 Ueber Theocin (Theophyllin) als Diureticum. O. Minkowski.
130 Cacodyl-Säure und Lungen-Tuberculose. E. Allard.
131 Neue Beiträge zur Tuberculose-Frage. F. Klemperer. Collective Review.
132 Pankreon bei chronischem Enteritis. Köppern.

Zeitschrift f. Heilkunde (Prague), xxiii.

133 (No. 8.) Beitrag zur Klinik der myasthenischen Paralysen. C. Hodlmoser.
134 *Zur Differentiell-Diagnose der primären und secundären Pleura-Tumoren mit bes. Berücksichtigung der Ergebnisse der Probe- (exploratory) Punction. J. Sorgo.
135 Fall von Kopf (head) Tetanus. H. Neumann.
136 Zur Theorie der Agglutination. R. Kraus.
137 (No. 9.) Ueber Carcinom-Bildung auf gummösem Boden. L. Spitzer.
138 Albumin-Splitting Action of Pus. R. Knapp.—Ueber die Eiweissspaltende Wirkung des Eiters.
139 Lymph-Angiom mit temporärer Chylorrhoe. Neumann.
140 Swallowed Foreign Bodies in Relation to Hernia. M. v. Statzer.—Ueber das Verhalten verschluckter Fremdkörper zu Brüchen.
141 Case of Cleft Lip, Jaw and Tongue. H. Salzer.—Fall von medialer Unterlippen Kiefer-Zungenspalte.
142 Elimination of Nitrogen and Uric Acid in Psoriasis. L. v. Zumbusch.—Ueber Gesammtstickstoff- und Harnsäure-Ausscheidung bei Psoriasis.

134. **Differentiation of Primary and Secondary Pleural Tumors.**—Sorgo states that when the fluid derived by exploratory puncture abounds in epithelial elements, it is suspicious of a neoplasm, but a hemorrhagic or chylous tendency or the presence of fat or glycogen is no evidence either for or against. The sediment should be examined both fresh and in hardened sections. The neoplastic nature of the affection is demonstrated by polymorphous epitheloid cells with large oval or irregularly-shaped nucleus, by polynucleated cells, by mitotic and amitotic segmentation of nuclei and cells, by large vacuolated cells and vacuolization of the cell connections. The protoplasm and the nucleus of the cells in the sediment from cases of carcinomatous pleuritis attracted attention by intense staining with polychrome methods, methylene blue or thiosin, and by the numerous variations in the tints. The sediment is more abundant in case of secondary carcinosis of the pleura. The finding of cylinder cells, glandular elements and vacuolized cells indicates positively metastasis in the pleura from a primary carcinoma in some glandular organ. He has had occasion to study two cases at Von Schrötter's clinic.

Grece Medicale (Syra, Greece), iv.

143 (No. 18.) Contribution à l'étude de la pathogénie des deviations menstruelles. C. Polani.
144 (No. 20.) La fiévre bilieuse hémoglobinurique n'est pas (is not) une maladie essentielle; elle est tout simplement un symptome qui varie quant à l'intensité. J. P. Cardamatis.
145 (No. 22.) *Quelques considérations sur la grande neurose et surtout sur la valeur sémeiologique de ses stigmates. E. Macris.

145. **Study of Hysteria.**—Macris has observed at Paris eight cases which he describes. All were typical examples of severe hysteria and all were cured by suggestion, yet none of them presented any of the so-called stigmata of hysteria. The heredity, anamnesis and symptoms rendered the diagnosis unmistakable, and it was confirmed by the prompt recovery under psychotherapy. The symptoms were those of astasia-abasia in one case, of dystasia-dysbasia in another, coxalgia in the third, rhythmic choreiform movements in a fourth, paralysis and coxalgia in the fifth, and paralysis or "grande hystérie" in the others.

Semana Medica (Buenos Ayres), ix.

146 (No. 17.) Posicion del corazon (heart) en los derrames (effusions) del percardio. Desviaciones del corazon. P. Uslenghi.
147 (No. 21.) La circuncision entre los Judios en la Republica Argentina. J. Rietti.
148 (No. 22.) *Tumores del encefalo. Sarcoma de la base. Ayerza.
149 *Investigaciones sobre la excitabilidad de los centros nerviosos despues de la muerte (after death). M. Alurralde.
150 *Simulation of Insanity. J. Ingegnieros.—Disimulacion de la locura.
151 (No. 24.) Conferencia medica sobre el paludismo y profilaxia en Brazil. J. Penna and others.
152 *Las inyecciones previas de suero (serum) artificial en la cirurgia abdominal. Bozetti.
153 (No. 26.) Investigaciones sobre la presion hidraulica del humor acuoso. V. Grandis.
154 (No. 27.) Cirrosis sifilitica. L. Agote.
156 (No. 28.) La anatomia patologica en sus relaciones con la cirugia del sistema nervioso. A. Tedeschi.
157 (No. 29.) Hemorrhagias por insercion viciosa de la placenta. S. Gache.
158 (No. 30.) El examen radioscopico de los organos abdominales, del rinon (kidney) y de la pelvis. C. Heusner.
159 (No. 31.) Pulsation of the Foot in Criminals and Insane. S. Tatti.—pulsacion del pié en los criminales y en los locos.
160 (No. 33.) *Tratamiento maritima de las tuberculosis quirugicas. M. Castro.
161 Los craneos del antiguo Peru. (Estudio del Professor Ranke.) R. L. Nitsche.
162 (No. 34.) Eclampsia puerperal. Sintesis de su estudio. J. C. R. Dominguez.
163 (No. 35.) *La psicopatologia de los criminales en sus relaciones con la simulacion de la locura (insanity). J. Ingegnieros.
164 (No. 38.) Contribucion al estudio de la tripanosomosis de los equideos sud-americanos conocida bajo el nombre de "Mal de Caderas." J. Lignières. (Commenced in No. 37.)
165 (No. 39.) *La verdadera interpretacion de la pulsacion del pie (foot). S. Tatti.

148. **Tumors of the Brain.**—Ayerza describes a case of sarcoma of the base which he was able to relieve of the intense pain, cerebral vomiting, blindness and paralysis of the legs, by simple puncture and evacuation of a certain amount of cerebrospinal fluid. The relief was immediate and durable to the time of writing, with two repetitions of the puncture.

149. **Study of Excitability of Nerve Centers After Death.**—Alurralde states as the result of his researches on dogs that the excitability of the nerve centers does not disappear with the suspension of the last sign of life. This postmortem excitability lasts for a shorter or longer time in different animals, ranging from eight to thirty minutes, becoming shorter the lower the animal stands in the list of warm-blooded animals. The cells in the spinal cord possess the highest degree of this postmortem excitability. It responds only to powerful chemicals which irritate and act destructively on the protoplasm, consequently it is impossible to reproduce the movement a second time on account of the injury to the parts.

152. **Preliminary Injections of Artificial Serum in Abdominal Surgery.**—Bozetti prepared an anemic patient for ablation of a fibroma weighing 19 pounds, by daily subcutaneous injections of artificial serum for a month previous to the intervention. She bore the operation well, without vomiting once. Since then all the patients, about 100 in all, have been systematically treated in this way with preliminary injections of artificial serum before abdominal interventions. The aim sought was the suppression of vomiting, and it was accomplished in nearly all. The few exceptions displayed merely a slight nausea. The patients rest after the operation without being disturbed by vomiting, while urination is copious. About 500 gm. of the serum are injected each twenty-four hours for a day or two preceding the operation.

160. **Seashore Treatment of Surgical Tuberculosis.**—Since the foundation of a seashore sanatorium for debilitated children near Buenos Ayres, in 1897, about 60 with tuberculous affections of the bones or ganglia have been sent there. The best results were obtained in those cases which had displayed a marked tendency to recuperation before being sent to the sanatorium. The seashore is evidently by no means a specific, and the tuberculous lesions pass through their usual phases the same there as elsewhere. There is no doubt that the benefit of sea air for such cases has been much exaggerated. The tanned cheeks of the children conceal the pallor of anemia beneath. The chief benefit from these seashore sanatoria is to receive children debilitated from other causes, after protracted infectious diseases, etc., and by restoring them to robust health abolish the predisposition to the acquisition of tuberculous lesions later. The child should stay a year at least, and sea bathing should be prohibited as its inconveniences outbalance the advantages. Children with albuminuria, pulmonary or very advanced lesions should not be sent to such a sanatorium.

163. **Psychopathology of Criminals in Simulation of Insanity.**—Ingegnieros argues that the most abnormal criminals are the least disposed to resort to insanity as a defense of their crime. The possibility of simulation is in inverse ratio to the degree of psychic degeneration of the individual.

165. **True Interpretation of the Pulsation of the Foot.**—Tatti called attention in 1898 to the foot beat, as one leg is crossed over the other, and stated that it probably represents the sum total of the contraction and dilation of all the arteries in the leg, plus the variation in size of the leg under the influence of the changes in the circulation, and its tonicity and elasticity. In case of mitral or aortic insufficiency the tracing of the foot beat varies in a characteristic manner from normal. He appends the "podogram," as he calls it, of the pulsation of the foot in a case of traumatic aneurism of the femoral artery after extirpation of the sac and ligature of the artery. The fact that the pulsation was noted in both feet excludes the idea that it is due to the action of any one vessel, or to the constriction of the vessels at the knee. He has been studying it in criminals and states that in the agitation and excitement common under the circumstances a nervous element is superadded to the circulatory in these cases.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

SELECTED PAPERS ON OPERATIVE AND CLINICAL SURGERY. By the Late William Stokes, M.D., M. Ch. (Univ. Dub.); F.R.C.S.I.; Knt., Surgeon in Ordinary to Her Majesty Queen Victoria in Ireland. Edited by William Taylor, B.A., M.D. (Univ. Dub.), F.R.C.S.I., Surgeon to and Lecturer on Clinical and Operative Surgery, Meath Hospital and Co. Dublin Infirmary. With a Memoir of the Author by Alexander Ogston, M.D., Regius Professor of Surgery, University of Aberdeen. Cloth. Pp. 484. Price, 10 shillings. London and Dublin. Bailliere, Tindall and Cox. 1902.

A TEXT-BOOK OF DISEASES OF THE EYE. A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. de Schweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania, etc. Fourth Edition, Revised, Enlarged, and Entirely Reset. With 280 Text-Illustrations and 6 Chromo-lithographic Plates. Cloth. Pp. 773. Price, $5.00 net. Philadelphia and London: W. B. Saunders & Co. 1903.

MALARIAL FEVER: Its Causes, Prevention and Treatment, Containing Full Details for the Use of Travelers, Sportsmen, Soldiers, and Residents in Malarious Places. By Ronald Ross, F.R.C.S., D.P.H., F.R.S., Walter Myers Lecturer Liverpool School of Tropical Medicine. Ninth Edition, Revised and Enlarged. Cloth. Pp. 68. Price, $0.75. New York: Longmans, Green & Co. 1902.

LESSONS AND LABORATORY EXERCISES IN BACTERIOLOGY. An Outline of Technical Methods Introductory to the Systematic Study and Identification of Bacteria. Arranged for the Use of Students. By Allen J. Smith, M.D., Professor of Pathology in the University of Texas, Galveston. Cloth. Pp. 298. Price, $1.50 net. Philadelphia: P. Blakiston's Son & Co. 1902.

MEDICAL MICROSCOPY. Designed for Students in Laboratory Work and for Practitioners. By T. E. Oertel, M.D., Professor of Histology, Pathology, Bacteriology and Clinical Microscopy, Medical Department, University of Georgia. With 131 Illustrations, Some of Which Are Colored. Cloth. Pp. 362. Price, $2.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

A MANUAL OF MEDICINE. Edited by W. H. Allchin, M.D. Lond., F.R.C.P., F.R.S. Edin., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital. Vol. IV. Diseases of the Respiratory and of the Circulatory Systems. Cloth. Pp. 493. Price, $2.00 net. New York: The Macmillan Co. 1902.

TWENTIETH CENTURY PRACTICES. An International Encyclopedia of Modern Medical Science, by Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. Volume XXI. Supplement. Cloth. Pp. 845. Price, $5.00. New York: Wm. Wood & Co. 1903.

THE MATTISON METHOD IN MORPHINISM. A Modern and Humane Treatment of the Morphin Disease. By J. B. Mattison, M.D., Medical Director, Brooklyn Home for Narcotic Inebriates. Cloth. Pp. 40. Price, $1.00. Published by the Author. New York: E. B. Treat & Co. 1902.

MANUAL OF ANTENATAL PATHOLOGY AND HYGIENE. The Fetus. By J. W. Ballantyne, M.D., F.R.C.P.E., F.R.S. Edin., Lecturer on Midwifery and Gynecology, Medical College for Women, Edinburgh. Cloth. Pp. 527. Price, $5.00 net. New York: Wm. Wood & Co. 1902.

OBSTETRICAL NURSING FOR NURSES AND STUDENTS. By Henry Enos Tuley, M.D., Louisville, Ky., Professor of Obstetrics, Kentucky University, Medical Department. Cloth. Pp. 202. Price, $1.00 net. Chicago: G. P. Engelhard & Co. 1902.

A TEXT-BOOK OF NURSING, for the Use of Training Schools, Families, and Private Students. By Clara Weeks-Shaw. Third Edition, Thoroughly Revised and Enlarged. Cloth. Pp. 397. Price, $1.75. New York: D. Appleton & Co. 1902.

HOW TO SUCCEED IN THE PRACTICE OF MEDICINE. By Joseph McDowell Mathews, M.D., LL.D., President of American Medical Association, 1898-9. Cloth. Pp. 215. Price, $2.00. Louisville: John P. Morton & Co. 1902.

THE PHYSICIAN'S VISITING LIST. 1903. Fifty-second Year. Leather. Prices: Regular Edition, $1.00 to $2.25; Perpetual, $1.25 and $1.50; monthly, $0.75 to $1.00. Philadelphia: P. Blakiston's Son & Co.

THE A B C OF PHOTO-MICROGRAPHY. A Practical Handbook for Beginners. By W. H. Walmsley. Cloth. Pp. 155. Price, $1.25 net. With 29 Photo-Micrographs by the Author. New York: Tennant and Ward.

REGIONAL MINOR SURGERY. By George Gray Van Schaick, M.D., Attending Surgeon French Hospital, N. Y. Profusely Illustrated. Cloth. Pp. 226. Price, $1.50. New York: International Journal of Surgery Co.

LIFE AND CORRESPONDENCE OF HENRY INGERSOLL BOWDITCH. In Two Volumes. Vols. I and II. Cloth. Pp. 337 and 397 Respectively. Price, $5.00 net. Boston and New York: Houghton, Mifflin & Co. 1902.

THE PROCEEDINGS OF THE CHARAKA CLUB. Volume I, 8vo. Pp. 97. Price, $3.50 net. Printed for the Club by William R. Jenkins. New York: William Wood & Co. 1902. Limited Edition.

TRANSACTIONS OF THE MINNESOTA STATE MEDICAL SOCIETY. Thirty-third and Thirty-fourth Annual Meetings. 1901 and 1902. Cloth. Pp. 307. Minneapolis: Northwestern Lancet. 1902.

THIRTY-SECOND ANNUAL REPORT OF THE CENTRAL STATE HOSPITAL OF VIRGINIA, for the Fiscal Year Ending Sept. 30, 1902. Paper. Pp. 74. Richmond: Everett Waddey Co. 1902.

FORDWELL GRAHAM, or Lost and Won by the Hand of the Dead. By W. June Arlington. Cloth. Pp. 414. Price, $1.25. Philadelphia: Allen, Lane & Scott.

THE ISLE OF CONTENT, and Other Waifs of Thought. By George F. Butler, M.D. Cloth. Pp. 142. Price, $2.50. Concord, Mass.: The Erudite Press. 1902.

THIRTY-THIRD ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF MASSACHUSETTS. Cloth. Pp. 615. Boston: Wright & Potter Printing Co. 1902.

LUCE E SALUTE. FOTOTERAPIA-RADIOTERAPIA del Dott. Angelo Bellini, con 65 illustrazioni. Pp. 355. One Vol. Milano: Ulrico Hoepli.

The Public Service.

Army Changes.

Movements of Medical Officers, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., from Dec. 15 to 20, 1902:

Hall, Henry M., contract surgeon, U. S. A., is granted leave of absence for one month.

O'Neill, Joseph A., contract surgeon, U. S. A., is granted leave of absence for one month.

Overton, David W., contract surgeon, U. S. A., is granted leave of absence to include Dec. 31, 1902.

Pinquard, Joseph, contract surgeon, U. S. A., is relieved from duty at Fort Leavenworth, Kan., to take effect on the arrival at that post of Captain John H. Stone, asst.-surgeon, U. S. A., and will then proceed to his home, Vinita, I. T., and on arrival report by letter to the Surgeon-General of the Army for annulment of contract.

Stockard, James K., contract surgeon, U. S. A., now at Greensboro, N. C., will proceed to Fort Delaware, Del., and report in person to the commanding officer of that post for duty and by letter to the commanding general, Department of the East.

The following named assistant surgeons, U. S. A., are relieved from duty at the places indicated after their respective names, and will report in person to the commanding general, Department of California, for transportation to the Philippine Islands on the transport to leave San Francisco Jan. 1, 1903, and on arrival at Manila will report in person to the commanding general, Division of the Philippines, for assignment to duty:

First Lieut. Milton E. Lando, discharge camp, Angel Island, Cal.; First Lieut. Charles Y. Brownlee, Bernicia Barracks, California.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending December 27:

Medical Inspector D. N. Bertolette, ordered to duty as fleet surgeon of the Pacific Station.

Medical Inspector E. H. Green, detached from duty as fleet surgeon, Pacific Station, and ordered to the *Wisconsin*.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Dec. 25, 1902:

Asst.-Surgeon H. B. Parker, granted leave of absence for 14 days from December 22.

Asst.-Surgeon M. J. White, granted leave of absence for 14 days from December 23.

Asst.-Surgeon B. J. Lloyd, relieved from duty at San Francisco Quarantine and directed to report to Surgeon A. H. Glennan, San Francisco, for duty.

A. A. Surgeon J. C. Ballard, granted leave of absence for five days from December 28.

A. A. Surgeon B. W. Goldsborough, leave of absence for three weeks granted by Department letter of Nov. 22, 1902, amended so that said leave shall be for 12 days only.

A. A. Surgeon S. C. Leonhardt, granted leave of absence for one month from January 1.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Dec. 27, 1902:

SMALLPOX—UNITED STATES.

California: Los Angeles, Dec. 7-14, 1 case; Sacramento, Dec. 6-13, 2 cases; San Francisco, Dec. 7-14, 3 cases.
Georgia: Atlanta, Dec. 10-17, 3 cases, 1 death.
Illinois: Chicago, Dec. 13-20, 2 cases.
Indiana: Elwood, Dec. 14-21, 1 case; Indianapolis, Dec. 13-20, 22 cases, 4 deaths.
Kentucky: Lexington, Dec. 13-20, 1 case.
Louisiana: New Orleans, Dec. 13-20, 1 case, imported from Monroe, La.
Massachusetts: Dec. 13-20, Boston, 16 cases, 6 deaths; Everett, 1 death; Lawrence, 2 cases.
Michigan: Grand Rapids, Dec. 13-20, 6 cases.
Missouri: St. Louis, Dec. 7-14, 14 cases.
Nebraska: Omaha, Dec. 13-20, 5 cases.
New Hampshire: Dec. 13-20, Manchester, 7 cases; Nashua, 15 cases.
New Jersey: Dec. 13-20, Camden, 3 cases; Newark, 2 cases.
New York: Dec. 13-20, Buffalo, 2 cases; New York, 1 case.
Ohio: Cincinnati, Dec. 12-19, 1 case; Cleveland, Dec. 13-20, 9 cases, 5 deaths; Dayton, Dec. 13-20, 7 cases; Hamilton, Dec. 13-20, 2 cases.
Pennsylvania: Dec. 13-20, Erie, 6 cases; Johnstown, 8 cases, 2 deaths; McKeesport, 1 case; Philadelphia, 15 cases.
South Carolina: Charleston, Dec. 6-13, 3 cases, 1 death.
Tennessee: Memphis, Dec. 6-13, 2 cases.
Washington: Tacoma, Dec. 7-14, 2 cases.
Wisconsin: Milwaukee, Dec. 6-20, 15 cases.

SMALLPOX—FOREIGN.

Austria: Prague, Nov. 22-29, 9 cases, 1 death.
Belgium: Antwerp, Nov. 22-29, 1 case, 1 death.
Brazil: Bahia, Nov. 15-29, 4 cases, 1 death.
Ecuador: Guayaquil, Nov. 22-29, 2 deaths.
Gibraltar: Nov. 23-30, 1 case.
Great Britain: Birmingham, Nov. 29-Dec. 6, 1 case; Edinburgh, Nov. 29-Dec. 6, 1 case; Leeds, Nov. 29-Dec. 6, 3 cases, 1 death; Liverpool, Nov. 29-Dec. 6, 18 cases, 4 deaths; London, Nov. 22-Dec. 6, 10 cases.
India: Bombay, Nov. 11-25, 4 deaths; Calcutta, Nov. 15-22, 1 death; Madras, Nov. 8-15, 1 death.
Italy: Palermo, Nov. 22-29, 4 cases, 1 death.
Mexico: City of Mexico, Nov. 30-Dec. 7, 6 cases, 2 deaths.
Russia: Moscow, Nov. 15-22, 7 cases; Odessa, Nov. 22-29, 1 case; St. Petersburg, Nov. 22-29, 4 cases, 1 death.
Straits Settlements: Singapore, Oct. 8-25, 1 death.
Turkey: Constantinople, Nov. 23-30, 3 deaths.
Uruguay: Montevideo, Nov. 1-8, 16 cases, 1 death.

YELLOW FEVER.

Ecuador: Guayaquil, Nov. 29-Dec. 6, 4 cases.
Mexico: Dec. 6-13, Coatzacoalcos, 1 case; Tampico, 8 deaths; Vera Cruz, 13 cases, 4 deaths.

CHOLERA—INSULAR.

Philippines: Manila, Oct. 19-Nov. 1, 33 cases, 20 deaths; Cebu, Oct. 30, 1 death; Provinces, Oct. 19-Nov. 1, 7,764 cases, 4,806 deaths.

CHOLERA—FOREIGN.

Egypt: Alexandria, Nov. 22-29, 11 deaths.
India: Bombay, Dec. 11-25, 1 death; Calcutta, Nov. 15-22, 26 deaths.
Java: Batavia, Oct. 24-Nov. 8, 81 cases, 68 deaths.
Straits Settlements: Singapore, Oct. 18-25, 17 deaths.

PLAGUE.

China: Hongkong, Nov. 1-8, 1 case, 1 death.
India: Bombay, Nov. 11-25, 253 deaths; Calcutta, Nov. 15-22, 9 deaths; Karachi, Nov. 16-23, 19 cases, 18 deaths.